Guide to Tabular Presentation

This section is intended to assist the reader in following the basic structure of the *Digest* tables and to provide a legend for some of the common symbols and indexes used throughout the book. Unless otherwise noted, all data are for the 50 states and the District of Columbia.

Table Components

Title Describes the table content concisely.

Unit Indicator Informs the reader of the measurement united in the table—"In thousands," "In millions of dollars," etc. Noted below the title unless several units are used, in which case the unit indicators are generally given in the spanner or individual column heads.

Spanner Describes a group of two or more columns.

Column head Describes specific column.

Stub Describes a row or a group of rows. Each stub is followed by a number of dots (leaders) or by a semicolon if no data appears in the data fields.

Field The area of the table which contains the data elements.

Rules in the field

Single horizontal rules indicate
- — that the data below the line add to the figure immediately above the line, or
- — in the case of derived figures (e.g., percents, medians) that the datum above the line represents a cumulative figure.

Double horizontal rules demarcate groups of related rows.

Single vertical rules delineate columns.

Double vertical rules divide the table into sections with unique stubs.

Example of Table Structure

Table 0.—Total enrollment in institutions of higher education, by type and control of institution: Fall 1979 to fall 1985

[In thousands]

Type and control of institution	Year				
	1979	1981	1983	1985	Percent change, 1979 to 1985
1	2	3	4	5	6
All institutions	**11,570**	**12,372**	**12,465**	**12,247**	**5.85**
Universities	2,840	2,901	2,889	2,871	1.10
Other 4-year institutions	4,514	4,754	4,852	4,845	7.35
2-year institutions	4,217	4,716	4,723	4,531	7.46
Public institutions	9,037	9,647	9,683	9,479	4.90
Universities	2,100	2,152	2,155	2,141	1.98
Other 4-year institutions	2,880	3,014	3,069	3,068	6.52
2-year institutions	4,057	4,481	4,459	4,270	5.25
Private institutions	2,533	2,725	2,782	2,768	9.27
Universities	740	749	734	730	-1.42
Other 4-year institutions	1,633	1,740	1,784	1,777	8.80
2-year institutions	160	236	264	261	[1]63.49

[1]Large percentage increase is due primarily to the addition of colleges accredited by the National Association of Trade and Technical Schools in 1980 and 1981.

NOTE.—Includes undergraduate, graduate, first-professional, and unclassified students.

SOURCE: U.S. Department of Education, Center for Education Statistics, "Fall Enrollment in Colleges and Universities" surveys. (This table was prepared July 1986.)

Footnote Describes a unique circumstance relating to a specific item within the table. Usually listed below the bottom rule of the table.

Note Furnishes general information that relates to the entire table.

Source The document or reference from which the data are drawn. This note may also include the organizational unit responsible for preparing the data.

Descriptive Terms

Average A number that is used to represent the ''typical value'' of a group of numbers. It is regarded as a measure of ''location'' or ''central tendency'' of a group of numbers.

Arithmetic mean is the most commonly used average. It is derived by summing the individual item values of a particular group and dividing that sum by the number of items. This value is often referred to simply as the ''mean'' or ''average.''

Median is the measure of central tendency that occupies the middle position in a rank order of values. It generally has the same number of items above it as below it. If there is an even number of items in the group, the median is the average of the middle two items.

Per capita, or per person, figure represents an average computed for every person in a specified group, or population. It is derived by dividing the total for an item (such as income or expenditures) by the number of persons in the specified population.

Index number A value that provides a means of measuring, summarizing, and communicating the nature of changes that occur from time to time or from place to place. An index is used to express changes in prices over periods of time but may also be used to express differences between related subjects at a single point in time.

The *Digest* most often uses the Consumer Price Index to compare purchasing power over time.

To compute a price index, a base year or period is selected. The base year price is then designated as the base or reference price to which the prices for other years or periods are related.

A method of expressing the price relationship is:

$$\text{Index number} = \frac{\text{Price of a set of one or more items for related year}}{\text{Price of the same set of items for base year}} \times 100$$

When 100 is subtracted from the index number, the result equals the percent change in price from the base year.

Current and constant dollars are used in a number of tables to express finance data. Unless otherwise noted, all figures are in current dollars, not adjusted for inflation. Constant dollars provide a measure of the impact of inflation on the current dollars.

Current dollar figures reflect actual prices or costs prevailing during the specified year(s).

Constant dollar figures attempt to remove the effects of price changes (inflation) from statistical series reported in dollar terms.

The constant dollar value for an item is derived by dividing the base year price index (for example, the Consumer Price Index for 1986) by the price index for the year of data to be adjusted and multiplying by the item to be adjusted. The result is an adjusted dollar value as it would presumably exist if prices were the same as the base year—in other words, as if the dollar had constant purchasing power. Any changes in the constant dollar amounts would reflect only changes in the real values.

NOTE: Tables may not include data for all years implied in table titles.

Guide to Sources
Sources and Comparability of Data

The information presented in this report was obtained from many sources, including federal and state agencies, private research organizations, and professional associations. The data were collected using many research methods, including surveys of a universe (such as all colleges) or of a sample, compilations of administrative records, and statistical projections. *Digest* users should take particular care when comparing data from different sources. Differences in procedures, timing, phrasing of questions, interviewer training, and so forth mean that the results from the different sources may not be strictly comparable. Following the general discussion of data accuracy below, descriptions of the information sources and data collection methods are presented, grouped by sponsoring organization. More extensive documentation of a particular survey's procedures does not imply more problems with the data, only that more information is available.

Accuracy of Data

The accuracy of any statistic is determined by the joint effects of ''sampling'' and ''nonsampling'' errors. Estimates based on a sample will differ somewhat from the figures that would have been obtained if a complete census had been taken using the same survey instruments, instructions, and procedures. In addition to such sampling errors, all surveys, both universe and sample, are subject to design, reporting, and processing errors and errors due to nonresponse. To the extent possible, these nonsampling errors are kept to a minimum by methods built into the survey procedures. In general, however, the effects of nonsampling errors are more difficult to gauge than those produced by sampling variability.

Sampling Errors

The samples used in surveys are selected from a large number of possible samples of the same size that could have been selected using the same sample design. Estimates derived from the different samples would differ from each other. The difference between a sample estimate and the average of all possible samples is called the sampling deviation. The standard or sampling error of a survey estimate is a measure of the variation among the estimates from all possible samples and, thus, is a measure of the precision with which an estimate from a particular sample approximates the average result of all possible samples.

The sample estimate and an estimate of its standard error permit us to construct interval estimates with prescribed confidence that the interval includes the average result of all possible samples. If all possible samples were selected under essentially the same conditions and an estimate and its estimated standard error were calculated from each sample, then: (1) approximately 2/3 of the intervals from one standard error below the estimate to one standard error above the estimate would include the average value of all possible samples; and (2) approximately 19/20 of the intervals from two standard errors below the estimate to two standard errors above the estimate would include the average value of all possible samples. We call an interval from two standard errors below the estimate to two standard errors above the estimate a 95 percent confidence interval.

To illustrate this concept, consider the table of standard errors and 95 percent confidence intervals for estimates from the 1989–90 Beginning Postsecondary Students Survey (table A1). For the estimate that 28.1 percent of all female students in a vocational certificate program completed the program in 9 months or less, the table shows that the standard error is 3 percent. Therefore, we can create a 95 percent confidence interval which is approximately 22.1 to 34.1 (28.1 percent + 2 times 3 percent).

Analysis of standard errors can help assess how valid a comparison between two estimates might be. The standard error of a difference between two independent sample estimates is equal to the square root of the sum of the squared standard errors of the estimates. The standard error (se) of the difference between independent sample estimates ''a'' and ''b'' is:

$$se_{a,b} = (se_a^2 + se_b^2)^{1/2}$$

It should be noted that most of the standard error estimates presented in subsequent sections and in the original documents are approximations. That is, to derive estimates of standard errors that would be

applicable to a wide variety of items and could be prepared at a moderate cost, a number of approximations were required. As a result, the standard error estimates provide a general order of magnitude rather than the exact standard error for any specific item. The preceding discussion on sampling variability was directed toward a situation concerning one or two estimates. Determining the accuracy of statistical projections is more difficult. In general, the further away the projection date is from the date of the actual data being used for the projection, the greater the probable error in the projections. If, for instance, annual data from 1970 to 1992 are being used to project enrollment in institutions of higher education, the further beyond 1992 one projects, the more variability in the projection. One will be less sure of the 2000 enrollment projection than of the 1995 projection. A detailed discussion of the projections methodology is contained in *Projections of Education Statistics to 2006* (National Center for Education Statistics, 1996).

Nonsampling Errors

Universe and sample surveys are subject to nonsampling errors. Nonsampling errors may arise when respondents or interviewers interpret questions differently, when respondents must estimate values, or when coders, keyers, and other processors handle answers differently, when persons who should be included in the universe are not, or when persons fail to respond (completely or partially). Nonsampling errors usually, but not always, result in an understatement of total survey error and thus an overstatement of the precision of survey estimates. Since estimating the magnitude of nonsampling errors often would require special experiments or access to independent data, these nonsampling errors are seldom available.

To compensate for nonresponse, adjustments of the sample estimates are often made. An adjustment made for either type of nonresponse, total or partial, is often referred to as an imputation, which is often a substitution of the ''average'' questionnaire response for the nonresponse. Imputations are usually made separately within various groups of sample members which have similar survey characteristics. Imputation for item nonresponse is usually made by substituting for a missing item the response to that item of a respondent having characteristics that are similar to those of the nonrespondent.

Although the magnitude of nonsampling error in the data compiled in this *Digest* is frequently unknown, idiosyncrasies that have been identified are noted on the appropriate tables.

Department of Education

National Center for Education Statistics (NCES)

Beginning Postsecondary Student Longitudinal Study

The Beginning Postsecondary Student Longitudinal Study (BPS) provides information concerning persistence, progress, and attainment from initial time of entry into postsecondary education through leaving and entering the workforce. BPS includes traditional and nontraditional (e.g., older) students and is representative of all beginning students in postsecondary education. BPS follows first-time, beginning students for at least 6 years at 2–year intervals, collecting student data, postsecondary transcripts, and financial aid reports. By starting with a cohort that has already entered postsecondary education, and following it for 6 years, BPS will be able to determine to what extent, if any, students who start postsecondary education later differ in their progress, persistence, and attainment.

Further information on the Beginning Postsecondary Student Longitudinal Survey may be obtained from:

Paula R. Knepper
Data Development and Longitudinal Studies Group
National Center for Education Statistics
555 New Jersey Avenue NW
Washington, DC 20208–5652

Common Core of Data

NCES uses the Common Core of Data (CCD) survey to acquire and maintain statistical data from each of the 50 states, the District of Columbia, and the outlying areas. Information about staff and students is collected annually at the school, LEA (local education agency or school district), and state levels. Information about revenues and expenditures is also collected at the state level.

Data are collected for a particular school year (July 1 through June 30) via survey instruments sent to the states by October 15 of the subsequent school year. States have 2 years in which to modify the data originally submitted.

Since the CCD is a universe survey, the CCD information presented in this edition of the Digest is not subject to sampling errors. However, nonsampling errors could come from two sources—nonreturn and inaccurate reporting. Almost all of the states submit the six CCD survey instruments each year, but submissions are sometimes incomplete or too late for publication.

Understandably, when 57 education agencies compile and submit data for approximately 85,000 public schools and 15,000 local school districts, misreporting can occur. Typically, this results from varying interpretation of NCES definitions and differing recordkeeping systems. NCES attempts to minimize these errors by working closely with the Council of Chief State School Officers (CCSSO) and its Committee on Evaluation and Information Systems (CEIS).

The state education agencies report data to NCES from data collected and edited in their regular reporting cycles. NCES encourages the agencies to incorporate into their own survey systems the NCES items they do not already collect so that those items will also be available for the subsequent CCD survey. Over time, this has meant fewer missing data cells in each state's response, reducing the need to impute data.

NCES subjects data from the education agencies to a comprehensive edit. Where data are determined to be inconsistent, missing, or out of range, NCES contacts the education agencies for verification. NCES-prepared state summary forms are returned to the state education agencies for verification. States are also given an opportunity to revise their state-level aggregates from the previous survey cycle.

Questions concerning the Common Core of Data can be directed to:

John Sietsema
Surveys and Cooperative Systems Group
National Center for Education Statistics
555 New Jersey Avenue NW
Washington, DC 20208–5651

Federal Support for Education

NCES prepares an annual compilation of federal funds for education. Data for U.S. Department of Education programs come from the *Budget of the U.S. Government.* Budget offices of other federal agencies provide information for all other federal program support except for research funds, which are obligations reported by the National Science Foundation in *Federal Funds for Research and Development.* Some data are estimated, based on reports from the federal agencies contacted and the *Budget of the U.S. Government.*

Except for money spent on research, outlays were used to report program funds to the extent possible. Some tables are obligations as noted in the title of the table. Some federal program funds not commonly recognized as education assistance are also included in the totals reported. For example, portions of federal funds paid to some states and counties as shared revenues resulting from the sale of timber and minerals from public lands have been estimated as funds used for education purposes. Parts of the funds received by states (in 1980) and localities (throughout the period) under the General Revenue Sharing Program are also included, as are portions of federal funds received by the District of Columbia. The share of these funds allocated to education was assumed equal to the share of general funds expended for elementary and secondary education by states and localities in the same year as reported by the U.S. Bureau of the Census in its annual publication, *Governmental Finances.*

All state intergovernmental expenditures for education were assumed earmarked for elementary/secondary education. Contributions of parent governments of dependent school systems to their public schools amounted to approximately 9 percent of local government revenues and local government revenue sharing in each year. Therefore, 9 percent of local government revenue-sharing funds were assumed allocated each fiscal year to elementary and secondary education. Parent government contributions to public school systems were obtained from the U.S. Bureau of the Census, *Finances of Public School Systems.* The amount of state revenue-sharing funds allocated for postsecondary education in 1980 was assumed to be 13 percent, the proportion of direct state expenditures for institutions of higher education reported in Governmental Finances for that year.

The share of federal funds for the District of Columbia assigned to education was assumed equal to the share of the city's general fund expenditures for each level of education.

For the job training programs conducted by the Department of Labor, only estimated sums spent on classroom training have been reported as educational program support.

During the 1970s, The Office of Management and Budget (OMB) prepared annual reports on federal education program support. These were published in *Budget of the United States Government [Special Analyses].* The information presented in this report is not, however, a continuation of the OMB series. A number of differences in the two series should be noted. OMB required all federal agencies to report outlays for education-related programs using a standardized form, thereby assuring agency compliance in reporting. The scope of education programs reported here differs from OMB. Off-budget items such as the annual volume of guaranteed student loans were not included in OMB's reports. Finally, while some mention is made of an annual estimate of federal tax expenditures, OMB did not include them in its annual analysis of federal education support. Estimated federal tax expenditures for education are the difference between current federal tax receipts and what these receipts would be without existing education deductions to income allowed by federal tax provisions.

Recipients' data are estimated based on *Estimating Federal Funds for Education: A New Approach Applied to Fiscal Year 1980,* U.S. Department of Education, ''Federal Support for Education, Fiscal Years 1980 to 1984,'' and Catalog of Federal Domestic Assistance. The recipients' data are estimated and tend to undercount institutions of higher education (IHEs), students, and local education agencies (LEAs). This is because some of the federal programs have more than one recipient receiving funds. In these cases, the recipients were put into a ''mixed recipients'' category, because there was no way to disaggregate the amount each recipient received.

High School and Beyond

High School and Beyond (HS&B) is a national longitudinal survey of 1980 high school sophomores and seniors. The base-year survey was a probability sample of 1,015 high schools with a target number of 36 sophomores and 36 seniors in each of the schools. A total of 58,270 students participated in the base-year survey. Substitutions were made for noncooperating schools—but not for students—in those strata where it was possible. Overall, 1,122 schools were selected in the original sample and 811 of these schools participated in the survey. An additional 204 schools were drawn in a replacement sample. Student refusals and absences resulted in an 82 percent completion rate for the survey.

Several small groups in the population were oversampled to allow for special study of certain types of schools and students. Students completed questionnaires and took a battery of cognitive tests. In addition, a sample of parents of sophomores and seniors (about 3,600 for each cohort) was surveyed.

HS&B first follow-up activities took place in the spring of 1982. The sample design of the first follow-up survey called for the selection of approximately 30,000 persons who were sophomores in 1980. The completion rate for sophomores eligible for on-campus survey administration was about 96 percent. About 89 percent of the students who left school between the base year and first follow-up surveys (dropouts, transfer students, and early graduates) completed the first follow-up sophomore questionnaire.

As part of the first follow-up survey of HS&B, transcripts were requested in fall 1982 for an 18,152 member subsample of the sophomore cohort. Of the 15,941 transcripts actually obtained, 1,969 were excluded because the students had dropped out of school before graduation, 799 were excluded because they were incomplete, and 1,057 were excluded because the student graduated before 1982 or the transcript indicated neither a dropout status nor graduation. Thus 12,116 transcripts were utilized for the overall curriculum analysis presented in this publication. All courses in each transcript were assigned a six-digit code based on *A Classification of Secondary School Courses* (developed by Evaluation Technologies, Inc. under contract with NCES). Credits earned in each course were expressed in Carnegie units. (The Carnegie unit is a standard of measurement that represents one credit for the completion of a 1-year course. To receive credit for a course, the student must have received a passing grade—''pass,'' ''D,'' or higher.) Students who transferred from public to private schools or from private to public schools between their sophomore and senior years were eliminated from public/private analyses.

In designing the senior cohort first follow-up survey, one of the goals was to reduce the size of the retained sample, while still keeping sufficient numbers of minorities to allow important policy analyses. A total of 11,227 (94 percent) of the 11,995 persons subsampled completed the questionnaire. Information was obtained about the respondents' school and employment experiences, family status, and attitudes and plans.

The sample for the second follow-up, which took place in spring 1984, consisted of about 12,000 members of the senior cohort and about 15,000 members of the sophomore cohort. The completion rate for the senior cohort was 91 percent, and the completion rate for the sophomore cohort was 92 percent.

HS&B third follow-up data collection activities were performed in spring of 1986. Both the sophomore and senior cohort samples for this round of data collection were the same as those used for the second follow-up survey. The completion rates for the sophomore and senior cohort samples were 91 percent and 88 percent, respectively.

Table A2 contains the maximum number of cases that are available for the tabulations of the specific classification variables used throughout this publication.

The standard error (se) of an individual percentage (p) based on HS&B data can be approximated by the formula

$$se_p = DEFT\,[p(100 - p)/n]^{1/2}$$

where n is the sample size and DEFT, the square root of the design effect, is a factor used to adjust for the particular sample design used in HS&B. Table A3 provides the DEFT factors for different HS&B samples and subsamples.

In evaluating a difference between two independent percentages, the standard error of the difference may be conservatively approximated by taking the square root of the sum of the squared standard errors of the two percentages. For example, in the

1986 follow-up of 1980 sophomores, 84.0 percent of the men and 77.2 percent of the women felt that being successful in work was ''very important,'' a difference of 6.8 percentage points. Using the formula and the sample sizes from table A2 and the DEFT factors from table A3, the standard errors of the two percentages being compared are calculated to be:

$$1.43[(84.0)(16.0)/(5,391)]^{1/2} = .714$$
$$1.43[(77.2)(22.8)/(5,857)]^{1/2} = .784$$

The standard error of the difference is therefore

$$(.714^2 + .784^2)^{1/2} = (.510 + .615)^{1/2} = 1.06$$

The sampling error (95 chances in 100) of the difference is approximately double the standard error, or approximately 2.1 percentage points, and the 95 percent confidence interval for the difference is 6.8 + 2.1, or 4.7 to 8.9 percentage points.

The standard error estimation procedure outlined above does not compensate for survey item nonresponse, which is a source of nonsampling error. (Table A2 reflects the maximum number of responses that could be tabulated by demographic characteristics.) For example, of the 10,925 respondents in the 1984 follow-up survey of 1980 high school graduates, 372, or 3.4 percent, did not respond to the particular question on whether they had ever used a pocket calculator. Item nonresponse varied considerably. A very low nonresponse rate of 0.1 percent was obtained for a question asking whether the respondent had attended a postsecondary institution. A much higher item nonresponse rate of 12.2 percent was obtained for a question asking if the respondent had used a micro or minicomputer in high school. Typical item nonresponse rates ranged from 3 to 4 percent.

The Hispanic analyses presented in this report relied on students' self-identification as members of one of four Hispanic subgroups: Mexican, Mexican-American, Chicano; Cuban; Puerto-Rican, Puertorriqueno, or Boricua; or other Latin American, Latino, Hispanic, or Spanish descent.

An NCES series of technical reports and data file users manuals provides additional information on the survey methodology.

Further information on the High School and Beyond survey may be obtained from:

Aurora M. D'Amico
Data Development and Longitudinal Studies Group
National Center for Education Statistics
555 New Jersey Avenue NW
Washington, DC 20208–5652

1990 High School Transcript Study Tabulations

This study involved analysis of transcripts of 1990 high school graduates from 330 schools. The analyses were based on approximately 21,500 1990 graduates selected for the National Assessment of Educational Progress (NAEP) in 1990. The study collected information such as course lists, graduation requirements, and the definition of units of credit and grades, on a school-level basis.

Similar studies were conducted of course taking patterns of 1987 and 1982 graduates. The 1987 data are based on approximately 22,799 transcripts from 433 schools obtained as part of the 1987 High School Transcript Study. The 1982 data are based on approximately 12,000 transcripts collected by the High School and Beyond Project.

Because the 1982 High School and Beyond study used a different method for identifying handicapped students than did the 1987 and 1990 transcript studies, and in order to make the statistical summaries as comparable as possible, all the counts and percentages in this report are restricted to students whose records indicate that they had not participated in a special education program. This restriction lowers the number of 1990 graduates represented in the tables to 20,866.

Further information can be obtained from:

Steve Gorman
Education Assessment Division
National Center for Education Statistics
555 New Jersey Avenue NW
Washington, DC 20208–5653

Integrated Postsecondary Education Data System

The Integrated Postsecondary Education Data System (IPEDS) surveys approximately 11,000 postsecondary institutions, including universities and colleges, as well as institutions offering technical and vocational education beyond the high school level. This survey, which began in 1986, replaced the Higher Education General Information Survey (HEGIS).

IPEDS consists of eight integrated components that obtain information on who provides postsecondary education (institutions), who participates in it and completes it (students), what programs are offered and what programs are completed, and both the human and financial resources involved in the provision of institutionally based postsecondary education. Specifically, these components include: Institutional Characteristics, including instructional activity; Fall Enrollment, including age and residence; Enrollment in Occupationally Specific Programs; Completions; Finance; Staff; Salaries of Full-Time Instructional Faculty; and Academic Libraries.

The higher education portion of this survey is a census of accredited 2– and 4–year colleges. Prior to 1993, data from the technical and vocational institutions were collected through a sample survey. Beginning in 1993, all data are gathered in a census of all postsecondary institutions. The tabulations on ''Institutional Characteristics'' developed for this edition of the *Digest* are based on lists of all institutions and are not subject to sampling errors.

Prior to the establishment of IPEDS in 1986, HEGIS acquired and maintained statistical data on the characteristics and operations of institutions of higher education. Implemented in 1966, HEGIS was an annual universe survey of institutions accredited at the college level by an agency recognized by the Secretary of the U.S. Department of Education. These institutions were listed in NCES's *Education Directory, Colleges and Universities.*

The trend tables presented in this report draw on HEGIS surveys which solicited information concerning institutional characteristics, faculty salaries, finances, enrollment, and degrees. Since these surveys were distributed to all higher education institutions, the data presented are not subject to sampling error. However, they are subject to nonsampling error, the sources of which varied with the survey instrument. Information concerning the nonsampling error of the enrollment and degrees surveys draws extensively on the ''HEGIS Post-Survey Validation Study'' conducted in 1979.

Further information on IPEDS may be obtained from:

Roslyn A. Korb
Surveys and Cooperative Systems Group
National Center for Education Statistics
555 New Jersey Avenue NW
Washington, DC 20208–5652

Institutional Characteristics

This survey provides the basis for the universe of institutions presented in the *Directory of Postsecondary Institutions.* The universe comprises institutions that met certain accreditation criteria and offered at least a 1-year program of college-level studies leading toward a degree. All of these institutions were certified as eligible by the U.S. Department of Education's Division of Eligibility and Agency Evaluation. The survey collects basic information necessary to classify the institutions including control, level, and kinds of programs; information on tuition, fees, and room and board charges; and unduplicated full-year enrollment counts and instructional activity.

Fall Enrollment

This survey has been part of the HEGIS and IPEDS series since 1966. The enrollment survey response rate is relatively high; the 1994 response rate was 96 percent. Major sources of nonsampling error for this survey as identified in the 1979 report, were classification problems, the unavailability of needed data, interpretation of definitions, the survey due date, and operational errors. Of these, the classification of students appears to have been the main source of error. Institutions had problems in correctly classifying first-time freshmen and other first-time students for both full-time and part-time categories. These problems occurred most often at 2-year institutions (private and public) and private 4-year institutions. In the 1977–78 HEGIS validation studies, the classification problem led to an estimated overcount of 11,000 full-time students and an undercount of 19,000 part-time students. Although the ratio of error to the grand total was quite small (less than 1 percent), the percentage of errors was as high as 5 percent for detailed student levels and even higher at certain aggregation levels.

Beginning with fall 1986, the survey system was redesigned with the introduction of the Integrated Postsecondary Education Data System (IPEDS) (see above). The IPEDS system comprises all postsecondary institutions, but also maintains comparability with earlier surveys by allowing HEGIS institutions to be tabulated separately. The survey allows (in alternating years) for the collection of age and residence data.

Salaries, Tenure, and Fringe Benefits of Full-Time Instructional Faculty

This institutional survey has been conducted for most years from 1966–67 to 1987–88, and annually since 1989–90. Although the survey form changed a number of times during those years, only comparable data are presented in this report.

Between 1966–67 and 1985–86 this survey differed from other HEGIS surveys in that imputations were not made for nonrespondents. Thus, there is some possibility that the salary averages presented in this report may differ from the results of a complete enumeration of all colleges and universities. Beginning with the surveys for 1987–88, the IPEDS data tabulation procedures included imputations for survey nonrespondents. The response rate for the 1994–95 survey was 95 percent for higher education institutions, or 92 percent overall. Because of the higher response rate for public colleges, it is probable that the public colleges' salary data are more accurate than the data for private colleges. Although data from these surveys are not subject to sampling error, sources of nonsampling error may include computational errors and misclassification in reporting and processing. NCES reviews individual colleges' data for internal and longitudinal consistency and contacts the colleges to check inconsistent data.

Completions

This survey was part of the HEGIS series throughout its existence. However, the degree classification taxonomy was revised in 1970–71, 1982–83, and 1991–92. Collection of degree data has been maintained through the IPEDS system.

Though information from survey years 1970–71 through 1981–82 is directly comparable, care must be taken if information before or after that period is included in any comparison. Degrees-conferred trend tables arranged by the 1991–92 classification are included in the *Digest* to provide consistent data from 1970–71 to 1993–94. Data in this edition on associate and other formal awards below the baccalaureate, by field of study, cannot be made comparable with figures prior to 1982–83. The nonresponse rate did not appear to be a significant source of nonsampling error for this survey. The return rate over the years has been high, with the higher education response rate for the 1993–94 survey at 97 percent. The overall response rate including the noncollegiate institutions is 89 percent. Because of the high return rate for the institutions of higher education, nonsampling error caused by imputation is also minimal.

The major sources of nonsampling error for this survey were differences between the NCES program taxonomy and taxonomies used by the colleges, classification of double majors, operational problems, and survey timing. In the 1979 HEGIS validation study, these sources of nonsampling contributed to an error rate of 0.3 percent overreporting of bachelor's degrees and 1.3 percent overreporting of master's degrees. The differences, however, varied greatly among fields. Over 50 percent of the fields selected for the validation study had no errors identified. Categories of fields that had large differences were business and management, education, engineering, letters, and psychology. It was also shown that differences in proportion to the published figures were less than 1 percent for most of the selected fields that had some errors. Exceptions to these were: master's and Ph.D. programs in labor and industrial relations (20 percent and 8 percent); bachelor's and master's programs in art education (3 percent and 4 percent); bachelor's and Ph.D. programs in business and commerce, and in distributive education (5 percent and 9 percent); master's programs in philosophy (8 percent); and Ph.D. programs in psychology (11 percent).

Financial Statistics

This survey was part of the HEGIS series and has been continued under the IPEDS system. Changes were made in the financial survey instruments in fiscal years (FY) 1976, 1982, and 1987. The FY 76 survey instrument contained numerous revisions to earlier survey forms and made direct comparisons of line items very difficult. Beginning in FY 82, Pell Grant data were collected in the categories of federal restricted grants and contracts revenues and restricted scholarships and fellowships expenditures. The introduction of IPEDS in the FY 87 survey included several important changes to the survey instrument and data processing procedures. While these changes were significant, considerable effort has been made to present only comparable information on trends in this report and to note inconsistencies. Finance tables for this publication have been adjusted by subtracting the largely duplicative Pell Grant amounts from the later data to maintain comparability with pre-FY 82 data.

Possible sources of nonsampling error in the financial statistics include nonresponse, imputation, and misclassification. The response rate has been about 85 to 90 percent for most of the years reported. The response rate for the FY 1994 survey was 95 percent.

Two general methods of imputation were used in HEGIS. If the prior year's data were available for a nonresponding institution, these data were inflated using the Higher Education Price Index and adjusted according to changes in enrollments. If no previous year's data were available, current data were used from peer institutions selected for location (state or region), control, level, and enrollment size of institution. In most cases estimates for nonreporting institutions in IPEDS were made using data from peer institutions.

Beginning with FY 87, the IPEDS survey system included all postsecondary institutions, but maintained comparability with earlier surveys by allowing 2- and 4-year HEGIS institutions to be tabulated separately. The finance data tabulated for this publication reflect totals for the HEGIS or higher education institutions only. For FY 87 through FY 91, in order to maintain comparability with the historical time series of HEGIS institutions, data were combined from two of the three different survey forms that make up the IPEDS survey system. The vast majority of the data were tabulated from Form 1, which was used to collect information from public and private nonprofit 2- and 4-year colleges. Form 2, a condensed form, was used to gather data for the 2-year proprietary institutions. Because of the differences in the data requested on the two forms, several assumptions were made about the Form 2 reports so that their figures could be included in the institutions of higher education totals.

In IPEDS, the Form 2 institutions were not asked to separate appropriations from grants and contracts, nor state from local sources of funding. For the Form 2 institutions, all the federal revenues were assumed

to be federal grants and contracts and all of the state and local revenues were assumed to be restricted state grants and contracts. All other Form 2 sources of revenue, except for tuition and fees and sales and services of educational activities, were included under ''other.'' Similar adjustments were made to the expenditure accounts. The Form 2 institutions reported instruction and scholarship and fellowship expenditures only. All other educational and general expenditures were allocated to academic support.

To reduce reporting error, NCES uses national standards for reporting finance statistics. These standards are contained in *College and University Business Administration: Administrative Services* (1974 Edition), and the *Financial Accounting and Reporting Manual for Higher Education* (1990 Education), published by the National Association of College and University Business Officers; *Audits of Colleges and Universities* (as amended August 31, 1974), by the American Institute of Certified Public Accountants; and *HEGIS Financial Reporting Guide* (1980), by NCES. Wherever possible, definitions and formats in the survey form are consistent with those in these four accounting texts.

Staff

The fall staff data presented in this publication were collected by NCES, through the IPEDS system, which collected data from postsecondary institutions, including all 2- and 4-year higher education institutions. The NCES collects staff data biennially in odd numbered years in institutions of postsecondary education.

The IPEDS ''Fall Staff'' questionnaires were mailed out by NCES; the respondents reported the number of employees in their institutions as of January 15, 1994. The ''Fall Staff'' questionnaires were mailed out by NCES between October and November 1993; the respondents reported the employment statistics in their institution that cover the payroll period closest to October 1 of the survey year.

The ''Fall Staff'' survey had an overall response rate of 87 percent. The response rate for higher education institutions was 92 percent.

The International Assessment of Educational Progress

The International Assessment of Educational Progress (IAEP), sponsored by the U.S. Department of Education and the National Science Foundation and conducted by the Educational Testing Service, surveyed the mathematics and science performance of 13-year-old students in 20 countries, and 9-year-old students in 14 countries during 1990–91. Some countries drew samples from virtually all children in the appropriate age group; others confined their assessments to specific geographic areas, language groups, or grade levels.

From each population at each level, a random sample of 3,300 students from about 110 different schools was selected; half were assessed in science and half in mathematics. During March 1991, a total of about 175,000 9- and 13-year-olds (those born in calendar years 1981 and 1977, respectively) were tested in 13 different languages.

The achievement tests given to 9-year-olds included 62 questions in mathematics and 60 questions in science. For the 13-year-olds, the test included 76 questions in mathematics and 72 questions in science. Students at each age spent additional time responding to questions about their backgrounds and home and school experiences. A school questionnaire was also completed by school administrators.

The statistical significance of differences in performance between participating countries was determined through use of the Bonferroni multiple comparison procedure. The procedure allows for the probability of falsely declaring a significant difference to 5 percent across the entire set of possible comparisons between pairs of countries.

For more information about this survey contact:

Eugene Owen
Data Development and Longitudinal Studies Group
National Center for Education Statistics
555 New Jersey Avenue NW
Washington, DC 20208–5653

National Adult Literacy Survey

The National Adult Literacy Survey was created as a new measure of literacy and funded by the Department of Education. It is the third and largest assessment of adult literacy funded by the federal government. The aim of the survey is to profile the English literacy of adults in the United States based on their performance across a wide array of tasks that reflect the types of materials and demands they encounter in their daily lives.

To gather the information on adults' literacy skills, trained staff interviewed nearly 13,600 individuals aged 16 and older during the first eight months of 1992. These participants had been randomly selected to represent the adult population in the country as a whole. Black and Hispanic households were oversampled to ensure reliable estimates of literacy proficiencies and to permit analyses of the performance of these subpopulations. In addition, some 1,100 inmates from 80 federal and state prisons were interviewed to gather information on the proficiencies of the prison population. In total, over 26,000 adults were surveyed.

Each survey participant was asked to spend approximately an hour responding to a series of diverse literacy tasks as well as questions about his or her demographic characteristics, educational background, reading practices, and other areas related to literacy. Based on their responses to the survey tasks, adults received proficiency scores along three scales which reflect varying degrees of skill in prose, document and quantitative literacy. The results of the survey were published in a report, *Adult Literacy in America* in September 1993.

Further information on the National Adult Literacy Survey may be obtained from:

Andrew Kolstad
Education Assessment Division
National Center for Education Statistics
555 New Jersey Avenue NW
Washington, DC 20208–5653

National Assessment of Educational Progress

The National Assessment of Educational Progress (NAEP) is a series of cross-sectional studies designed and initially implemented in 1969. NAEP has gathered information about selected levels of educational achievement across the country. NAEP has surveyed the educational attainments by age and grade (9-, 13-, and 17-year-olds, and 4th-, 8th-, and 12th-graders), and young adults (ages 25–35) in 10 learning areas. Different learning areas have been assessed periodically, and all areas have been reassessed in order to measure possible changes in educational achievement.

The assessment data presented in this publication were derived from tests designed and conducted by the Education Commission of the States (1969–1983) and by the Educational Testing Service (1983 to present). Three-stage probability samples have been used. The primary sampling units have been stratified by region and, within region, by state, size of community, and, for the two smaller sizes of community strata, by socioeconomic level. The first stage of sampling entails defining and selecting primary sampling units (PSU's). For each age/grade level (4,8, and 12) the second stage entails enumerating, stratifying, and randomly selecting schools, both public and private, within each PSU selected at the first stage. The third stage involves randomly selecting students within a school for participation in NAEP. Assessment exercises have been administered either to individuals or to small groups of students by specially trained personnel.

After NAEP data are scored, they are weighted in accordance with the population structure and adjusted for nonresponse. Analyses include computing the percentage of students giving various responses and using Item Response Theory (IRT) technology to estimate levels of achievement for the nation and various subpopulations. IRT technology enables the assessment of a sample of students in a learning area or subarea on a single scale even if different students have been administered different exercises. The underlying principle is that when a number of items require similar skills, the regularities observed across patterns of response can often be used to characterize both respondents and tasks in terms of a relatively small number of variables. When aggregated through appropriate mathematical formulas, these variables capture the dominant features of the data.

Sample sizes for the reading proficiency portion of the 1991–92 NAEP study were 4,944 for the 9-year-olds, 3,965 for the 13-year-olds, and 4,447 for the 17-year-olds. Sample sizes for the 1991–92 NAEP science study and the 1991–92 NAEP math study were: 7,335 for 9-year-olds, 5,909 for 13-year-olds, and 4,359 for 17-year-olds. Response rates were 94, 91, and 83 percent, respectively. Data on standard errors for the 1991–92 studies can be found in Tables A4, A5, and A6.

Sample sizes for the reading proficiency portion of the 1989–90 NAEP study were 4,268 for the 9-year-olds, 4,609 for the 13-year-olds, and 2,689 for the 17-year-olds. Response rates were 93 percent, 90 percent, and 82 percent, respectively. Response rates for earlier years (1970–71, 1974–75, and 1979–80) were generally lower. For example, the lowest response rate for the 9-year-olds was 88 percent in 1974–75, and the lowest response rate over all was 70 percent for the 17-year-olds in 1974–75.

The 1993–94 U.S. history assessment data in this report are based on a nationally representative sample of 5,499 4th-graders, 8,767 8th-graders, and 7,818 12th-graders. The response rates were: 90 percent for 4th-graders, 90 percent for 8th-graders, and 89 percent for 12th-graders.

The 1991–92 writing assessment was administered to 7,166 4th-graders, 11,112 8th-graders, and 11,532 12th-graders. Student response rates for the 1992–93 writing assessment were 93 percent for the 4th-graders, 89 percent for the 8th-graders, and 81 percent for the 12th-graders. Sample sizes varied depending on the test items and the scoring method used.

In 1991–92, a science assessment was administered to 7,335 4th-graders, 5,909 8th-graders, and 4,359 12th-graders. The response rates were 94 percent for the 4th-graders, 91 percent for the 8th-graders, and 83 percent for the 12th-graders.

The 1993–94 geography assessment was administered to 5,507 4th-graders, 6,878 8th-graders, and 6,234 12th-graders. The response rates for the assessment were 93 percent for the 4th-graders, 93

percent for the 8th-graders, and 90 percent for the 12th-graders.

In 1990, representative state-level data were produced for mathematics at the 8th-grade level. This was the first time NAEP had produced data on a state-by-state level. In 1992, state-level assessments were conducted in 4th-and 8th-grade mathematics and 4th-grade reading.

Information from NAEP is subject to both nonsampling and sampling error. Two possible sources of nonsampling error are nonparticipation and instrumentation. Certain populations have been oversampled to assure samples of sufficient size for analysis. Instrumentation nonsampling error could result from failure of the test instruments to measure what is being taught and, in turn, what is being learned by the students.

For further information on NAEP, contact:

Gary W. Phillips
Education Assessment Division
National Center for Education Statistics
555 New Jersey Avenue NW
Washington, DC 20208–5653

National Education Longitudinal Study of 1988

The National Education Longitudinal Study of 1988 (NELS:88) is the third major longitudinal study sponsored by the National Center for Education Statistics. The two studies that preceded NELS:88, the National Longitudinal Study of the High School Class of 1972 (NLS-72) and High School and Beyond (HS&B) in 1980, surveyed high school seniors (and sophomores in HS&B) through high school, postsecondary education, and work and family formation experiences. Unlike its predecessors, NELS:88 begins with a cohort of 8th-grade students. In 1988, some 25,000 eighth-graders, their parents, their teachers, and their school principals were surveyed. Follow-ups were conducted in 1990, 1992, and 1994, when a majority of these students were in 10th and 12th grades, and then 2 years after their scheduled high school graduation. A similar follow-up is being conducted in 1997.

NELS:88 is designed to provide trend data about critical transitions experienced by young people as they develop, attend school, and embark on their careers. It will complement and strengthen state and local efforts by furnishing new information on how school policies, teacher practices, and family involvement affect student educational outcomes (i.e., academic achievement, persistence in school, and participation in postsecondary education). For the base year, NELS:88 includes a multifaceted student questionnaire, four cognitive tests, a parent questionnaire, a teacher questionnaire, and a school questionnaire.

To ensure that private schools, rural schools, and schools with high minority membership were adequately represented, sampling was first conducted at the school level and then at the student level within schools. Additionally, oversamples of students with Hispanic and Asian or Pacific Island heritage were drawn. The base year data are drawn from a nationally representative sample of 1,000 schools (800 public schools; and 200 private schools, including parochial institutions). Within this school sample, 25,000 eighth-grade students were selected at random.

In 1990, when the students were in 10th grade, the students, school dropouts, their teachers, and their school principals were surveyed. The 1988 survey of parents was not a part of the 1990 follow-up. In 1992, when the students were in 12th grade the second follow-up conducted surveys of students, dropouts, parents, teachers, and school principals. Also, information on the students' transcripts, the schools' course offerings, and enrollments were collected, and there was a school effects survey. Tables A7 and A8 present the respondent counts and design effects of NELS:88 and the 1990 and 1992 follow-ups.

Further information about the NELS:88 survey can be obtained from:

Jeffrey A. Owings
Data Development and Longitudinal Studies Group
National Center for Education Statistics
555 New Jersey Avenue NW
Washington, DC 20208–5651

National Household Education Survey

The National Household Education Survey (NHES) is a data collection system that is designed to address a wide range of education-related issues. Surveys were conducted in the spring of 1991 and in the spring of 1993. It will be conducted in the spring of 1995 and biennially thereafter.

The NHES targets specific populations for detailed data collection. While the survey is not designed to develop an in-depth research database, it is intended to provide more detailed data on the topics and populations of interest than are collected through supplements to other household surveys.

The NHES is designed as a telephone survey of the noninstitutional civilian population of the U.S. Households are selected for the survey using random digit dialing (RDD) methods. Data are collected using computer assisted telephone interviewing (CATI) procedures.

The methodology for any single fielding of the NHES is linked to the research issues under study, the level of data required to address these issues, and how precise the estimates generated from the survey data need to be in order to meet the objec-

tives of the study. However, while the specifications for each annual survey will vary, there are general features of the NHES methodology that will stay relatively constant from one survey to the next.

NCES envisions the continued use of RDD methods to select the sample for the NHES in the future. Although the sample size for a particular component of the survey may vary somewhat from year to year, NCES expects to screen between 60,000 and 75,000 households for the annual surveys.

The topics addressed by the NHES:91 were early childhood education and adult education. About 60,000 households were screened for the NHES:91. In the Early Childhood Education component, about 14,000 parents/guardians of 3- to 8-year olds completed interviews about their children's early educational experiences. Included in this component were participation in nonparental care/education, characteristics of programs and care arrangements, and early school experiences including delayed kindergarten entry and retention in grade. In addition to questions about care/education arrangements and school, parents are asked about activities children engaged in with parents and other family members inside and outside the home. Information on family, household, and child characteristics was also collected.

In the NHES:91 Adult Education component, about 9,800 persons 16 years of age and older, identified as having participated in an adult education activity in the previous 12 months, were questioned about their activities. Data were collected on programs and up to four courses, including the subject matter duration, sponsorship, purpose, and cost. A smaller sample of nonparticipants (about 2,800) also completed interviews about barriers to participation. Information on the household and the adult's background and current employment also was collected. In the NHES:95 survey, of the 23,969 adults sampled for the adult education component, 80 percent (19,722) completed the interview.

In the NHES:93, nearly 64,000 households were screened. Approximately 11,000 parents of 3- to 7-year olds completed interviews for the School Readiness component. Topics included in this component were the developmental characteristics of preschoolers, school adjustment and teacher feedback to parents for kindergartners and primary students, center-based program participation, early school experiences, home activities with family members, and health status. Extensive family and child background characteristics, including parent language and education, income, receipt of public assistance, and household composition, were collected to permit the identification of at-risk children.

In the School Safety and Discipline component, about 12,700 parents of children in grades 3 through 12, and about 6,500 youth in grades 6 through 12, were interviewed about their school experiences. Topics included the school learning environment, discipline policy, safety at school, victimization, the availability and use of alcohol/drugs, and alcohol/drug education. Peer norms for behavior in school and substance use were also included in this topical component. Extensive family and household background information was collected, as well as characteristics of the school attended by the child. In the NHES:95 survey, the Early Childhood Program Participation component provides information on infants,' toddlers,' and preschoolers' participation in a variety of early care and education settings, including both home-based and center-based arrangements. The survey component also includes data on kindergarten and primary school history and experiences.

For more information contact:

Kathryn A. Chandler,
Surveys and Cooperative Systems Group
National Center for Education Statistics
555 New Jersey Avenue, NW
Washington, DC 20208–5651

National Longitudinal Study

The National Longitudinal Study (NLS) of the high school class of 1972 began with the collection of base-year survey data from a sample of about 19,000 high school seniors in spring of 1972. Five more follow-up surveys of these students were conducted in 1973, 1974, 1976, 1979, and 1986. The NLS was designed to provide the education community with information on the transitions of young adults from high school through postsecondary education and the workplace.

The sample design for the NLS is a stratified, two-stage probability sample of students from all schools, public and private, in the 50 states and the District of Columbia with a 12th-grade enrollment during the 1971–72 school year. During the first stage of sampling, about 1,070 schools were selected for participation in the base-year survey. As many as 18 students were selected at random from each of the sample schools. Both the size of the school and student samples were increased during the first follow-up survey. Beginning with the first follow-up and continuing through the fourth follow-up, about 1,300 schools participated in the survey and slightly under 23,500 students were sampled. The response rates for each of the different rounds of data collection have been 80 percent or higher.

Sample retention rates across the survey years have been quite high. For example, of the individuals responding to the base-year questionnaire, the percentages who responded to the first, second, third,

and fourth follow-up questionnaires were about 94, 93, 89, and 83 percent, respectively.

Further information may be obtained from:

Surveys and Cooperative Systems Group
National Center for Education Statistics
555 New Jersey Avenue NW
Washington, DC 20208–5652

National Postsecondary Student Aid Study

The National Postsecondary Student Aid Study (NPSAS) is a comprehensive nationwide study of how students and their families pay for postsecondary education. It covers national representative samples of undergraduates, graduates, and first-professional students; students attending less than 2–year institutions, 2– to 3–year schools, 4–year colleges, and major universities. Participants included students who do not receive aid and their parents as well as students who do receive financial aid and their parents. Study results are used to help determine future federal policy regarding student financial aid. The study is conducted every three years.

The first NPSAS was conducted during the 1986–87 school year. Data were gathered from about 1,130 colleges, universities, and other postsecondary institutions; 55,000 students; and 16,000 parents. These data provided information on the cost of postsecondary education, the distribution of financial aid, and the characteristics of both aided and nonaided students and their families.

As a part of the 1992–93 NPSAS, information on more than 78,000 undergraduates and graduate students enrolled during the school year was collected at 1,100 postsecondary institutions. The sample included students enrolled at any time between July 1, 1992 and June 30, 1993. About 66,000 students and a subsample of their parents were interviewed by telephone. Table A9 presents standard errors for undergraduates enrolled full-time and part-time in fall 1992, by aid status and source of aid during 1992–93, and control and level of institution.

Further information may be obtained from:

Andrew G. Malizio
Data Development and Longitudinal Studies Group
National Center for Education Statistics
555 New Jersey Avenue NW
Washington, DC 20208–5652

National Survey of Postsecondary Faculty

The National Survey of Postsecondary Faculty (NSOPF), a survey of instructional faculty in higher education institutions, was conducted for the first time in the 1987–88 academic year by NCES. The study consisted of three major components: the Institutional Survey, a stratified random sample of 480 institutional-level respondents, with a response rate of 88 percent; the Faculty Survey, a stratified random sample of 11,013 eligible faculty members within the participating institutions, with a response rate of 76 percent; and the Department Chair Survey, a stratified random sample of 3,029 eligible department chairpersons (or their equivalent) within the participating 2– and 4–year institutions, with a response rate of 80 percent.

Institutions were selected from nonproprietary U.S. postsecondary institutions that grant a 2–year (A.A.) or higher degree, and have been accredited by organizations recognized by the U.S. Department of Education. Included in this group are religious, medical, and other specialized institutions. This survey universe consisted of 3,159 institutions from the 1987 IPEDS.

The 1988 NSOPF gathered information on the backgrounds, responsibilities, workloads, salaries, benefits, and attitudes of full- and part-time instructional faculty in higher education institutions. Additional information was collected on faculty composition, turnover and recruitment, and retention and tenure policies from institutional and department-level respondents.

The second cycle of the National Study of Postsecondary Faculty (NSOPF-93) was limited to surveys of faculty and institutions, but with a substantially expanded sample of 974 public and private nonproprietary higher education institutions and 31,354 faculty. Unlike NPSOF-88, which was limited to faculty whose regular assignment included instruction, the faculty universe for NSOPF-93 was expanded to include anyone who was designated as faculty, whether or not their responsibilities included instruction, and other (non faculty) personnel with instructional responsibilities. Under this definition, researchers and administrators and other institutional staff who hold faculty positions, but who do not teach, were included in the sample. The definition of the institution universe for NSOFP-93 was identical to the one used in NSOPF-88.

For more information contact:

Linda J. Zimbler
Surveys and Cooperative Systems Group
National Center for Education Statistics
555 New Jersey Avenue NW
Washington, DC 20208–5652

Projections of Education Statistics

Since 1964, NCES has published projections of key statistics for elementary and secondary schools and institutions of higher education. These projections include statistics such as enrollments, instructional staff, graduates, earned degrees, and expenditures. The Projections reports include several alternative projection series and a methodology section

describing the techniques and assumptions used to prepare them. Data in this edition of the Digest reflect the middle alternative projection series.

Differences between the reported and projected values are, of course, almost inevitable. An evaluation of past projections revealed that, at the elementary and secondary level, projections of enrollments have been quite accurate: mean absolute percentage differences for enrollment were less than 1 percent for projections from 1 to 5 years in the future, while those for teachers were less than 4 percent. At the higher education level, projections of enrollment have been fairly accurate: mean absolute percentage differences were 5 percent or less for projections from 1 to 5 years into the future.

Since projections of time series are subject to errors both by the nature of statistics and the properties of projection methodologies, users are cautioned not to place too much confidence in the numerical values of the projections. Important, but unforeseeable, economic and social changes may lead to differences, particularly at the higher education level. Rather, projections are to be considered as indicators of broad trends.

For further information about projection methodology and accuracy, contact:

Debra E. Gerald
Data Development and Longitudinal Studies Group
National Center for Education Statistics
555 New Jersey Avenue NW
Washington, DC 20208–5654

Library Statistics Program

Nationwide, public library statistics are collected using the Public Libraries Survey and disseminated annually through the Federal-State Cooperative System for public library data (FSCS). Descriptive statistics are produced for nearly 9,000 public libraries. The Public Libraries Survey includes information about staffing; operating income and expenditures; type of governance; type of administrative structure; size of collection; and service measures such as reference transactions, public service hours, interlibrary loans, circulation, and library visits. In FSCS, respondents supply the information electronically, and data are edited and tabulated in machine-readable form.

The respondents are 8,929 public libraries identified in the 50 states and the District of Columbia by state library agencies. At the state level, FSCS is administered by State Data Coordinators, appointed by the Chief Officer of each State Library Agency. The State Data Coordinator collects the requested data from local public libraries and submits these data to NCES. An annual training conference sponsored by NCES is provided for the State Data Coordinators. A steering committee representing State Data Coordinators and other public library constituents is active in the development of FSCS data elements and software. Technical assistance to states is provided by phone and in person by the FSCS steering committee and by NCES staff and contractors. All 50 states and the District of Columbia have submitted data which are available for individual public libraries and are also aggregated to state and national levels.

Since 1990, data collections have been collected electronically. The most recent software is called DECPLUS. It includes identifying information on all known public libraries and their outlets, all state libraries, and some library systems and cooperatives. Beginning in 1994, this resource will be available for drawing samples for special surveys on such topics as literacy, access for the disabled, and library construction.

Under the Academic Libraries Survey (ALS), NCES surveyed academic libraries on a 3–year cycle between 1966 and 1992. Since 1988, ALS has been a component of the Integrated Postsecondary Education Data System and is on a 2–year cycle. ALS provides data on about 3,500 academic libraries. In aggregate, these data provide an overview of the status of academic libraries nationally and statewide. The survey collects data on the libraries in the entire universe of accredited higher education institutions and on the libraries in nonaccredited institutions with a program of 4 years or more. ALS produces descriptive statistics on academic libraries in postsecondary institutions in the 50 states, the District of Columbia and the outlying areas.

The School Library Statistics Survey collected data on school libraries/media centers in 1990–91. This survey asked questions on libraries in public and private schools as part of the Schools and Staffing Survey (SASS). These questionnaires were revised and a sample survey of about 7,600 schools was conducted during school year 1993–94. The library components of the 1990–91 SASS include: number of students served and number of professional staff and aides; at the district level, number of full-time equivalent librarians/media specialists, vacant positions, positions abolished, and approved positions; and amount of librarian input in establishing curriculum. The 1993–94 survey was much more extensive and added questions concerning media centers and collections of libraries.

Additional information on these academic and school library studies is available from:

Jeff Williams
Surveys and Cooperative Systems Group
National Center for Education Statistics
555 New Jersey Avenue NW
Washington, DC 20208–5652

Survey of Recent College Graduates

Since 1976, NCES has conducted six surveys of baccalaureate and master's degree recipients 1 year after graduation. The Recent College Graduates surveys have concentrated on those graduates entering the teaching profession. The surveys link major field of study with outcomes such as whether the respondent entered the labor force or was seeking additional education. Data on labor force includes employment status (unemployed, part-time or full-time employed), occupation, salary, career potential, relation to major field of study, and need for a college degree. To obtain accurate results on teachers, graduates with a major in education are oversampled. The latest 2 surveys continued to oversample education majors, but increased the sampling of graduates with majors in other fields.

The survey involves a two-stage sampling procedure. First, the universe of institutions awarding bachelor's and master's degrees is stratified by number or percentage of degrees awarded to education graduates and by control of institution (public or private). A sample of institutions within each strata is then selected. Second, for each of the selected institutions, a list of their graduates by major field of study is obtained and a sample of graduates is drawn by major field of study. Graduates in certain major fields of study (e.g., education, mathematics, physical sciences) are sampled at higher rates than graduates in others fields. Roughly one year after graduation the sample of graduates is located, contacted by mail or telephone, and asked to respond to the questionnaire.

The locating process is more detailed than in most surveys. Nonresponse rates are directly related to the time, effort, and resources used in locating graduates rather than to graduates' refusals to participate. Despite the difficulties in locating graduates, response rates for recent studies are comparable to studies without locating problems. The data presented in this report provide valuable information not available elsewhere about college outcomes.

The 1976 survey of 1974–75 college graduates was the first and smallest of the series. The sample consisted of 211 schools, of which 200 (96 percent) responded. Of the 5,854 graduates in the sample, 4,350 responded, for a response rate of 79 percent.

The 1981 survey was somewhat larger, with a coverage of 297 institutions and 15,852 graduates. Responses were obtained from 283 institutions, for an institutional response rate of 95 percent, and from 9,312 graduates (716 others were determined to be out of scope), for a response rate of 74 percent.

The 1985 survey sampled 404 colleges and 18,738 graduates of whom 17,853 were found to be in scope. Responses were obtained from 13,200 students, for a response rate of 78 percent. The response rate for the colleges was 98 percent. The 1987 survey form was sent to 21,957 graduates. Responses were received from 16,878, for a response rate of 79.7 percent.

The 1991 RCG study involved a sample of 18,135 graduates of 400 bachelor's and master's degree-granting institutions. The 18,135 graduates consisted of 16,172 bachelor's degrees recipients and 1,963 master's degree recipients between July 1, 1989 and June 30, 1990. Random samples of graduates were selected from lists stratified by field of study. Graduates in education, mathematics, and the physical sciences were sampled at a higher rate, as were minority graduates to provide a sufficient number of these graduates for analysis purposes. The graduates included in the sample were selected in proportion to the institution's number of graduates. The institutional response rate was 95 percent and the graduate response rate was 83 percent.

Table A10 contains sample sizes for number of graduates, by field, for the 1976, 1981, 1985, 1987, and 1991 surveys.

Further information on this survey may be obtained from:

Peter Stowe
Surveys and Cooperative Systems Group
National Center for Education Statistics
555 New Jersey Avenue NW
Washington, DC 20208–5652

Public School Principal Survey on Safe, Disciplined, and Drug-Free Schools

This sample survey used the NCES Fast Response Survey System (FRSS), which is designed to gather timely information for policy makers. The survey was conducted in 1991 by Westat, Inc. A national sample of 830 public school principals, representing a response rate of 94 percent, answered questions regarding the extent of discipline problems within their schools. They were also questioned about the nature and effectiveness of their schools' current policies and drug education programs.

This survey categorized principals by instructional level (elementary, secondary), type of school location (city, urban fringe, town, rural), enrollment size (less than 300, 300 to 999, 1,000 or more), region (Northeast, Central, Southeast, and West), and percentage of students receiving free or reduced-price lunches (10 percent or less, 11 to 40 percent, 41 percent or more).

For more information about this survey contact:

Judi Carpenter
Surveys and Cooperative Systems Group
National Center for Education Statistics
555 New Jersey Avenue NW
Washington, DC 20208–5651

Public School Kindergarten Teachers' Views on Children's Readiness for School

This sample survey of 1,448 public school kindergarten teachers was conducted as part of a national early childhood assessment system for National Education Goal One: ''By the year 2000, all American children will start school ready to learn.'' The survey obtained data on kindergarten teachers' views of children's readiness and on the teacher's classroom practices.

For more information about this survey contact:

Judi Carpenter
Surveys and Cooperative Systems Group
National Center for Education Statistics
555 New Jersey Avenue NW
Washington, DC 20208–5651

Advanced Telecommunications in U.S. Public Elementary and Secondary Schools, 1995

Current information regarding the availability and use of telecommunications, and in particular, access to the Internet, was requested by this sample survey. The data were gathered from a nationally representative sample of 917 public elementary and secondary schools in fall 1995. The survey was commissioned in response to the National Information Infrastructure (NII) set forth by the President to encourage an acceleration of the goal to connect all of the nation's school classrooms, as well as libraries, hospitals, and law enforcement agencies, to the ''Information Superhighway.''

For more information about this survey contact:

Judi Carpenter
Surveys and Cooperative Systems Group
National Center for Education Statistics
555 New Jersey Avenue, NW
Washington, DC 20208–5651

Schools and Staffing Survey

The Schools and Staffing Survey (SASS) is a set of linked questionnaires that covers public school districts, public and private schools, principals, and teachers, as its core components. SASS was first conducted for the National Center for Education Statistics by the Bureau of the Census during the 1987–88 school year. SASS subsequently was conducted in 1990–91 and in 1993–94. The next SASS is scheduled for school year 1998–99. SASS is a mailed questionnaire with telephone followup that collects data on the nation's public and private elementary and secondary teaching force, characteristics of schools and school principals, demand for teachers, and school/school district policies. The 1990–91 and 1993–94 SASS also collected data on Bureau of Indian Affairs (BIA) schools. The SASS data are collected through a sample survey of schools, the school districts associated with sampled schools, school principals, and teachers. The 1993–94 SASS expanded as well to cover school libraries and librarians, and field tested an administrative student records questionnaire.

The 1993–94 SASS estimates are based upon a sample consisting of approximately 9,900 public schools, 3,300 private schools, and 5,500 public school districts associated with the public schools in sample. From these schools, about 57,000 public school teachers and 11,500 private school teachers were selected for the 1993–94 SASS teacher survey.

The public school sample for the 1993–94 SASS was based upon the 1991–92 school year Common Core of Data (CCD), the compilation of all the nation's public school districts and public schools. CCD is collected annually from state education agencies. The frame includes regular public schools, Department of Defense-operated military base schools in the United States, and nonregular schools such as special education, vocational, and alternative schools. SASS is designed to provide national estimates for public and private school characteristics and state estimates for school districts, public schools, principals, and teachers. The teacher survey is designed as well to allow comparisons between new and experienced teachers, and between bilingual/ESL teachers and other teachers.

The private school sample for the 1993–94 SASS was selected from the 1991–92 Private School Universe Survey (PSS), supplemented with list updates from states and some associations available in time for sample selection. PSS collects basic data on all of the nation's private schools from two sources: the list frame and the area search frame. The list frame was compiled from a set of private school associations that provide NCES with their membership lists and states that gather lists of private schools. The area search frame consisted of schools not included on the list frame that were compiled from local sources in a sample of counties around the United States. Private school estimates are available at the national level and by type of private school.

The Teacher Demand and Shortage (school district) and School Principal Questionnaires were mailed out first in October 1993, along with School Library/Media Center and Library Media Specialist/Librarian Questionnaires. The weighted response rate for the Teacher Demand and Shortage Questionnaire

was 93.9 percent. Weighted response rates for the Public School Principal Questionnaire and the Private School Questionnaire were 96.6 percent and 87.6 percent, respectively.

In December 1993, public, private, and BIA school questionnaires were mailed out. The public, private, and BIA teacher questionnaires were sent out in several batches, between mid-December 1993 and early February 1994. Weighted response rates for the Public School Questionnaire and the Private School Questionnaire were 92.3 percent and 83.2 percent, respectively. Five percent of public schools and 9 percent of private schools did not provide a list of teachers in their schools and were thus ineligible for sampling. Weighted response rates were 88.2 percent for public school teachers and 80.2 percent for private school teachers.

Item response rates were varied, but generally high, ranging from 67 to 100 percent for the TDS, 65 to 100 percent for public school principal questions, 55 to 100 percent for private school principal items, 83 to 100 percent for public school items, 61 to 100 percent for private school survey items, 71 to 100 percent for public school teacher items, and 69 to 100 percent for private school teacher items.

Public-use and restricted-use microdata files are available on CD-ROM or 9–track tape. Summary data from the 1993–94 SASS can be found in *Schools and Staffing in the United States: Selected Data for Public and Private Schools, 1993–94* (NCES 95–191). More detailed results from the 1993–94 SASS are published in *Schools and Staffing in the United States: A Statistical Profile, 1993–94* (NCES 96–124). Data by state are available in *SASS by State - 1993–94 Schools and Staffing Survey Selected State Results* (NCES 96–312). Further information about the sample may be obtained from *1993–94 Schools and Staffing Survey: Sample Design and Estimation* (NCES 96–086). Data from previous SASS collections are published in the 1987–88 and 1990–91 *Profile* (NCES 92–127 and 93–146, respectively), as well as the 1987–88 and 1990–91 versions of the sample design report (NCES 91–127 and 93–449, respectively).

For more information about this survey or to order reports, contact:

Kerry Gruber
Surveys and Cooperative Systems Group
National Center for Education Statistics
555 New Jersey Avenue NW
Washington, DC 20208–5651

Office for Civil Rights

Civil Rights Survey of Elementary and Secondary Schools

The Office for Civil Rights (OCR), U.S. Department of Education, conducts biennial surveys of public school districts and of schools within those districts. Data are obtained on the characteristics of pupils enrolled in public schools throughout the Nation. Such information is required under Title VI of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, and Section 504 of the Rehabilitation Act of 1973 to enable OCR to carry out its compliance responsibilities. The 1990 survey included the 100 largest public school districts, those of special interest (i.e., court order, compliance review), and a stratified random sample of approximately 3,500 districts representing approximately 40,000 schools. School, district, and national data are currently available.

Further information is available from:

Peter McCabe
Office for Civil Rights
U.S. Department of Education
330 C Street SW
Washington, DC 20202

The Office of Special Education and Rehabilitative Services

Annual Report to Congress on the Implementation of the Education of the Handicapped Act

The Individual with Disabilities Education Act (IDEA), formerly the Education of the Handicapped Act (EHA) requires the Secretary of Education to transmit to Congress annually a report describing the progress in serving the nation's handicapped children. The annual report contains information on children served by the public schools under the provisions of Part B of the IDEA and for children served in state-operated programs (SOP) for the handicapped under Chapter I of the Elementary and Secondary Education Act (ESEA). Statistics on children receiving special education and related services in various settings and school personnel providing such services are reported in an annual submission of data to the Office of Special Education and Rehabilitative Services (OSERS), by the 50 states, the District of Columbia, and the outlying areas. The child count information is based on the number of handicapped children receiving special education and related services on December 1st of each year.

Since each participant in programs for the handicapped is reported to OSERS, the data are not subject to sampling error. However, nonsampling error can occur from a variety of sources. Some states follow a noncategorical approach to the delivery of special education services, but produce counts by handicapping condition because EHA-B requires it. In those states that do categorize their handicapped students, definitions and labeling practices vary.

Further information on the Annual Report to Congress may be obtained from:

Office of Special Education Programs
Office of Special Education and Rehabilitative Services
330 C Street SW
Washington, DC 20202

National Longitudinal Transition Study of Special Education Students

As part of the 1983 amendments to the Education of the Handicapped Act (EHA), Congress requested that the U.S. Department of Education conduct a national longitudinal study of the transition of secondary special education students to determine how they fare in terms of education, employment, and independent living. A 5–year study was mandated, which was to include youth from ages 13 to 21 who were in special education at the time they were selected and who represented all 11 federal disability categories. Data were drawn from extensive telephone interviews with parents, from school records, and from a survey of educators in secondary schools attended by youth in the study.

The study was conducted by SRI International and began in April, 1987. The National Transition Study involves a nationally representative sample of more than 8,000 secondary-age youth with disabilities. A sample of 450 school districts was randomly selected from the universe of approximately 14,000 school districts serving secondary special education students. An additional replacement sample of 176 additional districts was selected due to a low rate of agreement to participate from the initial group of districts. Participation in the study was invited from the approximately 80 special schools serving secondary-age deaf, blind, and deaf-blind schools. A total of approximately 300 school districts and 25 special schools agreed to have youth selected for the study.

For further information about this study, contact:

Office of Special Education and Rehabilitative Services
Office of Special Education Programs
330 C Street SW
Washington, DC 20202

Other Governmental Agencies

Bureau of the Census

Current Population Survey

Current estimates of school enrollment, as well as social and economic characteristics of students, are based on data collected in the Census Bureau's monthly household survey of about 60,000 households. The monthly Current Population Survey (CPS) sample consists of 729 areas comprising 1,973 counties, independent cities, and minor civil divisions throughout the 50 states and the District of Columbia. The sample was initially selected from the 1980 census files and is periodically updated to reflect new housing construction.

The monthly CPS deals primarily with labor force data for the civilian noninstitutional population (i.e., excluding military personnel and their families living on post and inmates of institutions). In addition, in October of each year, supplemental questions are asked about highest grade completed, level and grade of current enrollment, attendance status, number and type of courses, degree or certificate objective, and type of organization offering instruction for each member of the household. In March of each year, supplemental questions on income are asked. The responses to these questions are combined with answers to two questions on educational attainment: highest grade of school ever attended, and whether that grade was completed.

The estimation procedure employed for the monthly CPS data involves inflating weighted sample results to independent estimates of characteristics of the civilian noninstitutional population in the United States by age, sex, and race. These independent estimates are based on statistics from decennial censuses; statistics on births, deaths, immigration, and emigration; and statistics on the population in the armed services. Generalized standard error tables are provided in the Current Population Reports. The data are subject to both nonsampling and sampling errors.

Further information is available in the *Current Population Reports.* Series P-20, or by contacting:

Education and Social Stratification Branch
Population Division
Bureau of the Census
U.S. Department of Commerce
Washington, DC 20233

School Enrollment

Each October, the Current Population Survey (CPS) includes supplemental questions on the enrollment status of the population 3 years old and over. The main sources of nonsampling variability in the

responses to the supplement are those inherent in the survey instrument. The question of current enrollment may not be answered accurately for various reasons. Some respondents may not know current grade information for every student in the household, a problem especially prevalent for households with members in college or in nursery school. Confusion over college credits or hours taken by a student may make it difficult to determine the year in which the student is enrolled. Problems may occur with the definition of nursery school (a group or class organized to provide educational experiences for children), where respondents' interpretations of ''educational experiences'' vary.

Examples of sampling variability in the estimates of school enrollment rates are given in Table A11. Questions concerning the CPS ''School Enrollment'' survey may be directed to:

Education and Social Stratification Branch
Bureau of the Census
U.S. Department of Commerce
Washington, DC 20233

Educational Attainment

Data on years of school completed are derived from two questions on the Current Population Survey (CPS) instrument. Formal reports documenting educational attainment are produced by the Bureau of the Census using March CPS results. The latest report is Educational Attainment in the United States, March 1994 and 1993, Series P-20, No. 476, which is available from the Government Printing Office.

In addition to the general constraints of the CPS, some data indicate that the respondents have a tendency to overestimate the educational level of members of their household. Some inaccuracy is due to a lack of the respondent's knowledge of the exact educational attainment of each household member and the hesitancy to acknowledge anything less than a high school education. Another cause of nonsampling variability is the change in the numbers in the armed services over the years. In 1970, 25 percent of all males 20 and 21 years old were in the armed services. By 1974, this had decreased to less than 10 percent. The exclusion of members of the armed services appears to increase the proportion of the CPS population with some college and decrease the proportion of those who finished high school but went no further. After 1974, there was more stability in the proportion of young men in the military.

Beginning with the data for March 1980, tabulations have been controlled to the 1980 census. Examples of the sampling variability in the estimates of educational attainment are given in Table A12. The figures shown in the table hold for total or white population estimates only. The variability in estimates for subgroups (region, household relationships, etc.) can be estimated using the tables presented in *Current Population Reports.*

Questions concerning ''Educational Attainment in the United States'' may be directed to:

Education and Social Stratification Branch
Bureau of the Census
U.S. Department of Commerce
Washington, DC 20233

Government Finances

The Census Bureau conducts an annual survey of *Government Finances* as authorized by law under Title 13, United States Code, Section 182. This survey covers the entire range of government finance activities: revenue, expenditure, debt, and assets. Revenues and expenditures comprise actual receipts and payments of a government and its agencies, including government-operated enterprises, utilities, and public trust funds. The expenditure reporting categories comprise all amounts of money paid out by a government and its agencies with the exception of amounts for debt retirement and for loan, investment, agency, and private trust transactions.

Most of the federal government statistics for 1994 are based on figures that appear in *The Budget of the United States Government for the Fiscal Year 1995.* Since the classification used by the Census Bureau for reporting state and local government finance statistics differs in a number of important respects from the classification used in the United States Budget, it was necessary to adjust the federal data. For this report, federal budget expenditures include interest accrued, but not paid, during the fiscal year; Census data on interest are on a disbursement basis.

The state government finances for 1991 are based primarily on the annual Census Bureau survey of state finances for fiscal year 1991. Census staff compiled figures from official records and reports of the various states for most of the state financial data.

The sample of local governments is drawn from the 1987 Census of Governments and consists of certain local governments taken with certainty plus a sample below the certainty level.

The statistics in this Census report, *Governmental Finances,* that are based wholly or partly on data from the sample are subject to sampling error. State government finance data are not subject to sampling error. Estimates of major United States totals for local governments are subject to a computed sampling variability of less than one-half of l percent. The estimates are also subject to the inaccuracies in classification, response, and processing which would occur if a complete census had been conducted under the same conditions as the sample.

Further information can be obtained from:

Governments Division
Bureau of the Census
U.S. Department of Commerce
Washington, DC 20233

1990 Census of Population - Education in the United States

This report is based on a part of the decennial census which consists of questions asked of a 1–in-6 sample of persons and housing units in the United States. This sample was asked more detailed questions about income, occupation and housing costs in addition to general demographic information.

School Enrollment

Persons classified as enrolled in school reported attending a ''regular'' public or private school or college at any time between February 1, 1990 and the time listed. Questions asked were whether the institution attended was public or private, and level of school in which the student was enrolled.

Educational Attainment

Data for educational attainment were tabulated for persons 15 years and over, and classified according to the highest grade completed or the highest degree received. Instructions were also given to include the level of the previous grade attended or the highest degree received for persons currently enrolled in school.

Poverty status

To determine poverty status, answers to income questions were used and compared to the appropriate poverty threshold. All persons except institutionalized persons, persons in military group quarters and in college dormitories, and unrelated persons under 15 years old were considered. If total income of each family or unrelated individual in the sample was less than the corresponding cutoff, that family or individual was classified as ''below the poverty level.''

Further information can be obtained from:

Population Division
Bureau of the Census
U.S. Department of Commerce
Washington, DC 20233

National Institute on Drug Abuse

The National Institute on Drug Abuse of the U.S. Department of Health and Human Services is the primary supporter of the long-term study entitled ''Monitoring the Future: A Continuing Study of the Lifestyles and Values of Youth,'' conducted at the University of Michigan, Institute for Social Research. One component of the study deals with student drug abuse. Results of a national sample survey have been published annually since 1975. Approximately 125 to 135 schools have participated each year. With the exception of 1975 when about 9,400 students participated in the survey, the annual senior samples are comprised of roughly 17,000 students. They complete self-administered questionnaires given to them in their classrooms by University of Michigan personnel. Beginning in 1991, similar surveys of nationally representative samples of 8th- and 10th grade samples have been conducted annually. The 10th grade samples involve about 15,000 students in 125 schools each year, while the 8th grade samples have approximately 18,000 students in 160 schools. Over the years, the response rate has varied from 77 to 84 percent. Table A15 provides examples of the survey's sampling error.

Understandably, there will be some reluctance to admit illegal activities. Also, students who were out of school on the day of the survey were nonrespondents. The survey did not include high school dropouts. The inclusion of these two groups would tend to increase the proportion of individuals who had used drugs. A 1983 study found that the inclusion of the absentees could increase some of the drug usage estimates by as much as 2.7 percent. (Details on that study and its methodology were published in *Drug Use Among American High School Students, College Students, and Other Young Adults,* by Lloyd D. Johnston, Patrick M. O'Malley, and Jerald G. Bachman, available from the National Clearinghouse on Drug Abuse Information, 5600 Fishers Lane, Rockville, MD 20857.)

Further information on this survey may be obtained from:

National Institute of Drug Abuse
Division of Epidemiology and Statistical Analysis
5600 Fishers Lane
Rockville, MD 20857

National Science Foundation

Survey of Earned Doctorates Awarded in the United States

The Survey of Earned Doctorates Awarded in the United States has collected basic statistics from the universe of doctoral recipients in the United States each year since 1958. It has been supported by five federal agencies: the National Science Foundation, in conjunction with the U.S. Department of Education; the National Endowment for the Humanities; the U. S. Department of Agriculture; and the National Institute of Health.

A survey form is distributed, with the assistance of graduate deans, to each person completing the requirements for a doctorate. Of the approximately 40,000 persons eligible for the survey, approximately

95 percent respond. The questionnaire obtains information on sex, race/ethnicity, marital status, citizenship, handicaps, dependents, specialty field of doctorate, educational institutions attended, time spent in completion of doctorate, financial support, educational debt, postgraduation plans, and educational attainment of parents. The data are collected, edited, and published by the National Academy of Sciences.

For further information contact:

Science and Engineering Education and
Human Resources Program
Division of Science Resources Studies
National Science Foundation
4201 Wilson Boulevard
Arlington, Virginia 22230

Federal Obligations to Universities, Colleges and Nonprofit Institutions

Each year, the National Science Foundation collects data on obligations to colleges and universities from federal agencies. Obligations differ from expenditures in that funds obligated during one fiscal year may be spent by the recipient in later years. Obligation amounts include direct federal support, so that amounts subcontracted to other institutions are included. Those funds received through subcontracts from prime contractors are excluded. Also excluded from the data are certain types of financial assistance, such as the Department of Education's Guaranteed Student Loan Program and obligations to the U.S. service academies. For purposes of tabulations in this publication, university-administered federally funded research and development centers (FFRDCs) have been included in appropriate state totals.

The universe of academic institutions for this survey is based on the Integrated Postsecondary Education Data Survey conducted by the National Center for Education Statistics (see above). Institutions without federal support were excluded and some systems were combined into single reporting units.

Further information on this survey may be obtained from *Federal Support to Universities, Colleges, and Nonprofit Institutions,* published by the National Science Foundation, or by contacting:

Science and Engineering Activities Program
Division of Science Resources Studies
National Science Foundation
4201 Wilson Boulevard
Arlington, Virginia 22230

Survey of Scientific and Engineering Expenditures at Universities and Colleges

The National Science Foundation's annual academic survey collects data on research and development expenditures in the sciences and engineering from a sample of 459 institutions in the United States and outlying areas. Those institutions were selected from the universe of 595 schools that grant a graduate science or engineering degree and/or perform activities for which at least $50,000 has been funded from separately budgeted R&D expenditures. In addition, the survey includes 19 university-affiliated, federally funded research and development centers (FFRDCs).

The 459 institutions sampled for FY 1991, include all doctorate-granting institutions, all historically black colleges and universities with any R&D expenditures, and a random sample of all other institutions. The response rate was 97 percent. Data presented are assembled from the most recently completed survey and represent the latest totals available as of August 1992.

Further information on this survey may be obtained from *Academic Science/Engineering, R&D Funds,* published by the National Science Foundation, or by contacting:

Science and Engineering Activities Program
Division of Science Resources Studies
National Science Foundation
4201 Wilson Boulevard
Arlington, Virginia 22230

Other Organization Sources

American College Testing Program

The American College Testing (ACT) Assessment is designed to measure educational development in the areas of English, mathematics, social studies, and natural sciences. The ACT Assessment is taken by college-bound high school students and the test results are used to predict how well students might perform in college.

Prior to the 1984–85 school year, national norms were based on a 10 percent sample of the students taking the test. Since then, national norms are based on the test scores of all students taking the test. Moreover, beginning with 1984–85, these norms have been based on the most recent ACT scores available from students scheduled to graduate in the spring of the year. Duplicate test records are no longer used to produce national figures.

Separate ACT standard scores are computed for English, mathematics, social studies, science reasoning, and, as of October 1989, reading. ACT standard scores are reported for each subject area on a scale from 1 to 36. The four ACT standard scores have a mean (average) of about 19 and a standard deviation of about 6 for college-bound students nationally. A composite score is obtained by taking the simple average of the four standard scores and is an indication of student's overall academic development across these subject areas. Beginning with the Octo-

ber 1989 test date, a new version of the ACT was introduced.

It should be noted that college-bound students who take the ACT Assessment are not representative of college-bound students nationally. First, students who live in the Midwest, Rocky Mountains and Plains, and the South are overrepresented among ACT-tested students as compared with college-bound students nationally. Second, ACT-tested students tend to enroll in public colleges and universities more frequently than do college-bound students nationally.

For further information, contact:

The American College Testing Program
2201 North Dodge Street
P.0. Box 168
Iowa City, IA 52243

American Federation of Teachers

The American Federation of Teachers (AFT) has reported national and state average salaries and earnings for teachers, other school employees, government workers, and professional employees over the past 25 years. The AFT's survey of state departments of education obtains information on minimum salaries, experienced teachers reentering the classroom, and teacher age and experience. Most data from the survey are reported as received, although some data are confirmed by telephone. These data are available in the AFT's annual report *Salary and Analysis of Salary Trends.* While this serves as the primary vehicle for reporting the results of the AFT's annual survey of state departments of education, several other data sources are also used in the report.

Further information on this survey can be obtained from:

American Federation of Teachers
555 New Jersey Avenue NW
Washington, DC 20001

College Entrance Examination Board

The Admissions Testing Program of the College Board comprises a number of college admissions tests, including the Preliminary Scholastic Assessment Test (PSAT) and the Scholastic Assessment Test (SAT). High school students participate in the testing program as sophomores, juniors, or seniors—some more than once during these 3 years. If they have taken the tests more than once, only the most recent scores are tabulated. The PSAT and SAT report subscores in the areas of mathematics and verbal ability.

The SAT results are not representative of high school students or college-bound students nationally since the sample is self-selected. Generally, tests are taken by students who need the results to attend a particular college or university. The state totals are greatly affected by the requirements of its state colleges. Public colleges in a number of states require ACT scores rather than SAT scores. Thus, the proportion of students taking the SAT in these states is very low and is inappropriate for any comparison. In recent years, more than 1 million high school students have taken the examination annually.

Further information on the SAT can be obtained from:

College Entrance Examination Board
Educational Testing Service
Princeton, NJ 08541

Council for Aid to Education

The Council for Aid to Education, Inc., (CFAE) is a not-for-profit corporation funded by contributions from business. CFAE largely provides consulting and research services on voluntary support to corporations and information services to education institutions. Each year CFAE conducts a survey of colleges and universities and private elementary and secondary schools to obtain information on the amounts, sources, and purposes of private gifts, grants, and bequests received during the academic year.

In the 1991–92 study, survey forms were sent to approximately 2,900 colleges and universities and 1,280 responded. The response rates were much higher for the 4–year colleges than for the 2–year colleges. For example, 89 percent of the doctoral-level institutions and 55 percent of the comprehensive and general baccalaureate colleges participated in the survey, but only 12 percent of the 2–year colleges responded. CFAE estimates that about 84 percent of all voluntary support is reported in the survey because of the high participation of institutions receiving large amounts of funding.

Survey forms are reviewed by CFAE for internal consistency before preparing a computerized database. Institutional reports of voluntary support data from the CFAE ''Survey of Voluntary Support of Education'' are more comprehensive and detailed than the related data in the ''Financial Statistics of Institutions of Higher Education'' survey conducted by NCES. The results from the ''Survey of Voluntary Support of Education'' are published in the annual *Voluntary Support of Education,* which may be purchased from CFAE.

Further information is available from:

Director of Research
Council for Aid to Education, Inc.
51 Madison Avenue
Suite 2200
New York, NY 10010

Council of Chief State School Officers

The Council of Chief State School Officers (CCSSO) is a nonprofit organization of the 57 public officials who head departments of public education in every state, the outlying areas, the District of Columbia, and the Department of Defense Dependents Schools. In 1985, the CCSSO founded the State Education Assessment Center to provide a locus of leadership by the states to improve the monitoring and assessment of education. *State Education Indicators, 1993* is the principal report of the Assessment Center's program of indicators on education. Most of the data are obtained from a member questionnaire; the remainder of the data are obtained from federal government agencies. Information on mathematics education was taken from *CCSSO, State Policies on Science and Mathematics Evaluation, 1992.*

For additional information, contact:

Wayne Martin
State Education Assessment Center
Council of Chief State School Officers
One Massachusetts Avenue, NW
7th Floor
Washington, DC 20001

Council of State Directors of Programs for the Gifted

The Council of State Directors of Programs for the Gifted is composed of the director or individual in the leadership position for gifted education in each of the 50 states, the District of Columbia, and the outlying areas. The Council has conducted many surveys in the past and most recently conducted two comprehensive state surveys in order to produce a profile of gifted education throughout the Nation. These data are reported in the 1985, 1987, 1990 and 1994 ''State of the States Gifted and Talented Education'' reports. This edition of the *Digest* uses data from the 1993–94 school year.

Further information is available from:

Evie Hiatt, President
Council of State Directors of Programs for the Gifted
Care of Texas Education Agency
Division of Adult Education
1701 North Congress
Austin, Texas 78701

Education Commission of the States

The Education Commission of the States (ECS) Clearinghouse collects information on laws and standards in the field of education and reports them periodically in ''Clearinghouse Notes.'' The Commission collects information about administrators, principals, and teachers. It also examines policy areas, such as assessment and testing, collective bargaining, early childhood issues, quality education, and school schedules. The information is collected by reading state newsletters, tracking state legislation, and surveying state education agencies. Data are verified by the individual states when necessary. Even though ECS monitors state activity on a continuous basis, it updates the reports only when there is significant change in state activity.

Further information is available from:

Chris Pipho
Education Commission of the States
1860 Lincoln Street, Suite 300
Denver, CO 80295

Gallup Poll

Each year the Gallup Poll conducts the ''Public Attitudes Toward the Public Schools'' survey, funded by Phi Delta Kappa. The survey includes interviews with adults representing the civilian noninstitutional population 18 years old and over.

The sample used in the 27th annual survey was made up of a total of 1,311 respondents and is described as a modified probability sample of the nation. Personal, in-home interviewing was conducted in representative communities.

The survey is a sample survey and is subject to sampling error. The size of error depends largely on the number of respondents providing data. Table A16 shows the approximate sampling errors associated with different percentages and sample sizes for the survey. Table A17 provides approximate sampling errors for comparisons of two sample percentages.

For example, an estimated percentage of about 10 percent based on the responses of 1,000 sample members has an approximate sampling error of 2 percent at the 95 percent confidence level. The sampling error for the difference in two percentages (50 percent versus 41 percent) based on two samples of 750 members and 400 members, respectively, is about 8 percent at the 95 percent confidence level.

Further information on this survey can be obtained from:

Neville Robertson
Phi Delta Kappa
P.O. Box 789
Bloomington, IN 47402–0789

Independent Sector

In 1992, Independent Sector commissioned the Gallup Poll to conduct a national survey on the giving and volunteering behavior of Americans. This survey is part of a series of surveys that will be conducted every 2 years. The information was obtained from in-home personal interviews conducted from April 3 to May 17, 1992, with a representative national sample

of 2,671 adult Americans 18 or more years old. The sampling procedure did not include those with incomes above $200,000 because they constitute such a small percentage of the population.

The results from this survey are published in *Giving and Volunteering in the United States* and may be purchased from:

Independent Sector
1828 L Street NW
Washington, DC 20036

International Association for the Evaluation of Educational Achievement (IEA)

The International Association for the Evaluation of Educational Achievement, known as the IEA, is comprised of research centers and scholars from around the world whose aim is to investigate education problems common among countries. In 1988, the IEA General Assembly, composed of the research institutes participating in IEA projects, decided to undertake a study of reading literacy. The study held its first National Research Coordinator (NRC) meeting in November 1988. The construction and pilot testing of instruments was conducted in the period from November 1988 to July 1990. The main testing took place in the period October 1990 to April 1991 depending on the school year in each country. Thirty-two school systems were involved in the IEA Reading Literacy Study. Data were collected from 210,059 students, 10,518 teachers, and 9,073 schools. All students took reading tests for two sessions totaling 75 minutes at the 9–year-old level and two sessions totaling 85 minutes at the 14–year-old population. All students responded to a background questionnaire about their reading at home and at school. Teachers and school principals responded to questionnaires about themselves, their teaching and the school organization. Each national center (NCES was the center for the United States) completed a National Case Study Questionnaire.

For more information, contact:

Marilyn Binkley, NRC USA
National Center for Education Statistics
555 New Jersey Avenue, NW
Washington, DC 20208–5650

Institute of International Education

Each year the Institute of International Education (IIE) conducts a survey of the number of foreign students studying in American colleges and universities and reports these data in *Open Doors,* an annual publication. All of the regionally accredited institutions in the *Education Directory, Colleges and Universities* published by NCES are surveyed by IIE. The data presented in the *Digest* are drawn from the IIE survey which requests the total enrollment of foreign students in an institution and information on student characteristics, such as country of origin. For the 1994–95 survey, 2,684 out of 2,758 (97.3 percent) institutions reported data for the survey.

Additional information can be obtained from the publication *Open Doors* or by contacting:

Todd M. Davis
Institute of International Education
809 United Nations Plaza
New York, NY 10017–3580

Metropolitan Life Insurance Company

The Metropolitan Life Survey of the American Teacher for the Metropolitan Life Insurance Company was conducted by Louis Harris and Associates. This survey was designed to measure the experiences of new public school teachers who began their first year of teaching in the 1990–91 school year. It includes questions on their experiences with students, administrators, other teachers, and parents. There were three surveys of this cohort of new teachers. The first survey was conducted during the summer of 1990 to measure the expectations of new graduates from teaching schools immediately prior to their first year of teaching in public schools. The second survey compared how these new teachers' experiences in their first year of teaching affected their attitudes, and how the actual experience of teaching compared with their prior expectations. The current survey focuses on these teachers' experience two years into their teaching career. It includes questions which allow comparisons on their attitudes toward teaching now versus one and two years ago.

A total of 1,000 teachers who began their first year of teaching in the public schools in the 1990–91 school year were surveyed. The sample was designed to be representative of all new teachers in the public schools who graduated from teaching colleges in 1990 and taught for the first time in a public school in the 1990–91 school year.

The sample was drawn from lists of 1990 graduates from a probability sample of colleges listed by the American Association of Colleges for Teacher Education. Graduates who did not teach full-time in public schools in 1990–91 were excluded from the sample.

The priority for fielding the sample was as follows: first, any respondents from the second phase of the study (after the first year of teaching); second, any respondents from the first phase (before teaching) who were not also included in the second phase; finally, any remaining teachers from the original sample group who were not used in the first phase.

All interviews were conducted by telephone in May and June 1992.

For more information contact:

Metropolitan Life Survey of the American Teacher
Metropolitan Life Insurance Company
One Madison Avenue
New York, NY 10010

National Association of State Scholarship and Grant Programs

The National Association of State Scholarship and Grant Programs (NASSGP) is an association of states with general programs of scholarship or grant assistance for undergraduate study. Executive officers responsible for grant program administration represent each state in the Association. *The 26th Annual Survey Report: 1994–95 Academic Year* is produced the by the New York State Higher Education Services Corporation, and data are reported for all 50 states, the District of Columbia, and Puerto Rico.

For more information on this survey, contact:

Charles Treadwell
New York State Higher Education Services Corporation
99 Washington Avenue, Room 1438
Albany, NY 12255
Attention: NASSGAP

National Education Association

The National Education Association (NEA) reports enrollment, expenditure, revenue, graduate, teacher, and instructional staff salary data in its annual publication, *Estimates of School Statistics.* Each year NEA prepares regression-based estimates of financial and other education statistics and submits them to the states for verification. Generally about 30 states adjust these estimates based on their own data. These preliminary data are published by NEA along with revised data from previous years. States are asked to revise previously submitted data as final figures become available. The most recent publication contains all changes reported to the NEA.

Status of the American Public School Teacher

The ''Status of the American Public School Teacher'' survey is conducted every 5 years by the National Education Association (NEA). The survey was designed by the NEA Research Division and initially administered in 1956. The intent of the survey is to solicit information covering various aspects of public school teachers' professional, family, and civic lives.

Participants for the survey are selected using a two-stage sample design, with the first-stage stratum determined by the number of students enrolled in the districts. Selection probabilities are determined so that the resulting sample is self-weighting. In 1990–91, questionnaires were sent to a sample of 1,981 of the nation's approximately 2,400,000 public school teachers. With an initial and four follow-up mailings, 1,499 questionnaires were returned, of which 145 were not usable. The sample was adjusted to 1,836 to reflect the 145 unusable responses. The response rate was 73.7 percent.

Possible sources of nonsampling errors are nonresponses, misinterpretation, and—when comparing data over years—changes in the sampling method and instrument. Misinterpretation of the survey items should be minimal, as the sample responding is not from the general population but one knowledgeable about the area of concern. Also, the sampling procedure changed after 1956 and some wording of items has changed over the different administrations.

Since sampling is used, sampling variability is inherent in the data. An approximation to the maximum standard error for estimating the population percentages is 1.4 percent. To estimate the 90 percent confidence interval for population percentages, the maximum standard error of 1.4 percent is multiplied by 1.65 (1.4 x 1.65). The resulting percentage (2.3) is added and subtracted from the population estimate to establish upper and lower bounds for the confidence interval. For example, if a sample percentage is 60 percent, there is a 90 percent chance that the population percentage lies between 57.7 percent and 62.3 percent (60 percent + 2.3 percent).

Questions concerning the ''Status of the American Public School Teacher'' survey may be directed to:

National Education Association–Research
1201 16th Street NW
Washington, DC 20036

Organization for Economic Cooperation and Development

The Organization for Economic Cooperation and Development (OECD) publishes analyses of national policies in education, training, and economics in more than 20 countries. The countries surveyed are: Australia, Austria, Belgium, Canada, Czeck and Slovak Federal Republic, Denmark, Finland, France, Germany, Hungary, Ireland, Italy, Japan, Luxembourg, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, United Kingdom, United States, and the former Yugoslavia.

Since only developed nations, mostly European, are included in these studies, the range of analysis is limited. However, OECD data allow for some detailed international comparison of financial resources or other education variables to be made for this selected group of countries.

In the past several years, OECD has revised its data collection procedures to highlight current education issues. The Centre for Educational Research and Innovation (CERI) has developed an Indicators of Education Systems (INES) project involving representatives of the OECD countries and the OECD Secretariat to improve international education statistics. Large improvements in data quality and comparability among OECD countries have resulted from the country to country interaction sponsored through the INES project. The most recent publication in this series is *Education at a Glance* (1995).

More complete information on INES may be obtained from:

Norberto Bottani
INES/OECD
2, rue Andre-Pascal
75775 Paris CEDEX 16
France

Research Associates of Washington

Research Associates annually compiles the Higher Education Price Index (HEPI) which measures average changes in prices of goods and services purchased by colleges and universities through current-fund educational and general expenditures. Sponsored research and auxiliary enterprises are not priced by the HEPI.

The HEPI is based on the prices (or salaries) of faculty and of administrators and other professional service personnel; clerical, technical, service, and other nonprofessional personnel; and contracted services, such as data processing, communication, transportation, supplies and materials, equipment, books and periodicals, and utilities. These represent the items purchased for current operations by colleges and universities. Prices for these items are obtained from salary surveys conducted by various national higher education associations, the American Association of University Professors, the Bureau of Labor Statistics, and the National Center for Education Statistics; and from components of the Consumer Price Index (CPI) and the Producer Price Index (PPI) published by the U.S. Department of Labor, Bureau of Labor Statistics.

The quantities of these goods and services have been kept constant based on the 1971–72 buying pattern of colleges and universities. The weights assigned the various items priced, which represent their relative importance in the current-fund educational and general budget, are estimated national averages. Variance in spending patterns of individual institutions from these national averages reduces only slightly the applicability of the HEPI to any given institutional situation. Modest differences in the weights attached to expenditure categories have little effect on overall index values. This is because the HEPI is dominated by the trend in faculty salaries and similar salary trends for other personnel hired by institutions, which absorbs or diminishes the effects of price changes in other items purchased in small quantities.

For more information, contact:

Research Associates
Kent Halstead
2605 Klingle Road, NW
Washington, DC 20008

United Nations Educational, Scientific, and Cultural Organization

The United Nations Educational, Scientific, and Cultural Organization (UNESCO) conducts annual surveys of education statistics of its member countries. Besides official surveys, data are supplemented by information obtained by UNESCO through other publications and sources. Each year more than 200 countries reply to the UNESCO surveys. In some cases, estimates are made by UNESCO for particular items such as world and continent totals. While great efforts are made to make them as comparable as possible, the data still reflect the vast differences among the countries of the world in the structure of education. While there is some agreement about the reporting of first- and second-level data, the third level (postsecondary education) presents numerous substantial problems. Some countries report only university enrollment while other countries report all postsecondary, including vocational and technical schools and correspondence programs. A very high proportion of some countries' third-level students attend institutions in other countries. While definition problems are many in this sort of study, other survey problems should not be overlooked. The member countries that provide data to UNESCO are responsible for their validity. Thus, data for particular countries are subject to nonsampling error and perhaps sampling error as well. Some countries may furnish only rough estimates, while data from other countries may be very accurate. Other difficulties are caused by the varying periodicity of data collection among the countries of the world. In spite of such problems, many researchers use UNESCO data because they are the best available for such a large group of countries. Users should examine footnotes carefully to recognize some of the data limitations.

More complete information may be obtained from the *Statistical Yearbook* published by UNESCO or from:

Office of Statistics
UNESCO
7, Place de Fontenoy
75700 Paris
France

Table A1.—Standard errors for enrollment and completion status of first-time postsecondary students starting during the 1989–90 academic year, by degree objective and other student characteristics: 1994

Student characteristics	2-year college students starting in 1989–90						Students seeking bachelor's degrees in 1989–90					
	Attained by 1994 [1]				No degree by 1994		Highest degree completed, not enrolled for bachelor's degree [2]				Still enrolled for bachelor's [3]	No degree, not enrolled [4]
	Total	Certificate	Associate	Bachelor's	Enrolled	Not enrolled	Total, degree	Certificate	Associate	Bachelor's		
Total	**1.9**	**1.3**	**1.7**	**1.0**	**1.5**	**2.0**	**1.3**	**0.5**	**0.9**	**1.4**	**1.0**	**1.2**
Male	2.6	1.8	1.9	1.4	2.4	2.9	1.9	0.7	1.0	1.7	1.5	1.7
Female	2.8	1.9	2.6	1.3	1.8	2.9	1.7	0.8	1.3	1.9	1.2	1.6
Race												
White, non-Hispanic	2.2	1.6	1.9	1.1	1.5	2.2	1.5	0.6	1.0	1.6	1.0	1.3
Black, non-Hispanic	6.6	4.9	4.3	2.2	4.8	7.5	4.1	1.2	3.1	3.3	2.8	4.1
Hispanic	6.2	4.9	4.4	3.0	6.7	7.0	5.5	3.3	2.2	4.8	4.6	5.5
Asian/Pacific Islander	—	—	—	—	—	—	5.9	0.6	3.1	6.0	4.8	6.4
Socioeconomic status in 1989–90												
Low (25 percent)	4.7	3.6	2.6	1.0	3.0	4.9	4.7	3.2	2.9	3.7	3.6	4.9
Middle (50 percent)	2.7	1.8	2.0	1.3	2.3	2.9	1.9	0.8	1.1	2.0	1.6	1.9
High (25 percent)	3.3	2.1	3.3	2.3	2.5	3.0	1.8	0.7	1.1	1.8	1.3	1.4
Dependent student family income in 1989–90												
Less than $20,000	4.4	3.3	3.9	2.1	3.7	4.4	2.8	0.5	1.6	2.6	2.3	3.0
$20,000 to $39,999	4.2	2.9	3.3	2.5	3.2	4.0	2.3	1.1	1.3	2.1	1.9	2.2
$40,000 to $59,999	4.8	3.0	4.3	2.6	3.2	4.7	2.6	1.3	1.2	2.4	1.7	2.5
$60,000 or more	6.2	2.9	6.7	3.8	5.6	5.9	2.5	0.6	2.0	3.0	2.2	1.7
Diploma/delayed entry status [5]												
Diploma, did not delay	2.3	1.6	2.3	1.7	2.0	2.2	1.4	0.5	0.8	1.5	1.0	1.2
Diploma, delayed entry	2.9	2.4	1.9	0.8	2.2	3.1	3.8	2.3	2.7	2.7	3.7	4.3
No diploma	5.7	4.8	3.1	1.3	2.9	6.3	6.1	2.0	1.4	5.1	6.8	9.1
Age (as of 12/31/89)												
18 years or younger	2.6	1.7	2.6	2.0	2.1	2.7	1.5	0.6	0.9	1.5	1.1	1.3
19 years	4.5	3.4	3.8	1.2	3.9	4.8	3.1	1.1	1.3	2.9	2.9	3.1
20 to 29 years	3.8	3.1	2.3	1.1	3.1	4.3	4.9	3.4	3.9	3.6	4.5	5.8
30 years or over	4.5	3.5	2.5	0.6	2.9	4.4	5.9	1.8	4.5	3.3	7.0	8.6
Marital status												
Never married	2.2	1.5	1.9	1.4	1.9	2.4	1.4	0.6	1.0	1.5	1.0	1.2
Married	4.6	3.6	2.5	1.3	2.7	5.1	5.8	1.6	1.2	5.3	6.2	7.5
Divorced, widowed, separated	6.8	6.7	2.5	1.0	4.6	7.8	9.0	0.6	7.8	5.3	10.5	11.8
Expected degree level for 2-year students												
Less than 2 years	6.7	6.4	2.5	0.0	5.8	7.4	—	—	—	—	—	—
2 to 4 years	4.5	3.7	2.6	1.0	3.1	4.4	—	—	—	—	—	—
Bachelor's or higher	2.3	1.5	2.1	1.4	1.8	2.5	—	—	—	—	—	—
Average hours worked per week while enrolled												
None	4.7	4.2	3.1	2.0	2.9	5.0	2.5	0.8	1.3	2.5	1.8	2.5
1 to 20 hours	4.8	2.9	4.0	2.5	2.9	4.3	2.2	0.6	1.2	2.2	1.6	1.9
More than 20 hours	2.2	1.6	1.8	1.2	1.9	2.5	1.9	0.9	1.0	1.9	1.4	—
Received financial aid during 1989–90												
Yes	3.1	2.2	2.3	1.9	2.3	3.2	1.5	0.4	0.6	1.6	0.9	1.4
No	2.3	1.6	2.1	1.0	1.7	2.5	2.1	0.9	1.6	2.0	1.6	1.8

[1] Highest degree attained at any institution. Students who have attained may also be enrolled.

[2] Status as of 1994. Includes those students who are no longer working towards a bachelor's degree, but who had completed another type of degree or award.

[3] Status as of 1994. Includes students who had completed another type of degree or award (associate degree: 11.8 percent, certificate: 2.7 percent) but are still working toward a bachelor's degree.

[4] Status as of 1994. Enrollment can be full-time or part-time. Includes students who are still enrolled, but are no longer working toward a bachelor's degree.

[5] Students were considered to have a diploma only if they had a regular high school diploma. Students with a GED or other high school credentials were considered to have no diploma.

—Data not available or not applicable.

NOTE.—Data reflect completion and enrollment status by spring 1994 of first-time postsecondary students starting in academic year 1989–90.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Beginning Postsecondary Student Longitudinal Survey, 1994. (This table was prepared September 1996.)

Table A2.—Respondent counts for selected High School and Beyond surveys

Classification variable and subgroup	Followup survey of 1980 sophomores in 1982	Followup survey of 1980 seniors in 1982	Followup survey of 1980 sophomores in 1984	Followup survey of 1980 seniors in 1984	Followup survey of 1980 sophomores in 1986	Followup survey of 1980 seniors in 1986
Total respondents (unweighted)	**25,830**	**11,227**	**11,463**	**10,925**	**11,248**	**10,536**
Sex						
Male	12,717	5,213	5,514	5,058	5,391	4,832
Female	13,113	6,014	5,949	5,867	5,857	5,704
Race/ethnicity						
White, non-Hispanic	17,295	5,180	7,285	5,057	7,194	5,246
Black, non-Hispanic	3,338	2,724	1,651	2,625	1,585	2,726
Hispanic	4,439	2,749	1,795	2,654	1,745	1,950
Asian or Pacific Islander	413	367	425	355	413	356
American Indian or Alaskan Native	248	191	253	185	246	200
Other or unclassified	97	16	54	49	65	58
Socioeconomic status composite (SES) [1]						
Low	6,752	3,940	2,831	3,857	2,751	3,668
Low-middle	6,234	2,390	2,624	2,314	2,559	2,289
High-middle	6,134	2,168	2,849	2,107	2,817	1,995
High	6,341	1,988	3,086	1,936	3,044	1,900
Unclassified	369	741	73	711	77	684
Father's highest level of education						
Less than high school	5,179	—	—	—	—	—
High school graduate [2]	11,961	—	—	—	—	—
College graduate [3]	5,169	—	—	—	—	—
Don't know/missing	3,521	—	—	—	—	—
High school program (self-reported)						
Academic	10,152	4,145	6,547	4,007	—	3,899
General	8,789	3,829	3,468	3,764	—	3,602
Vocational	6,664	2,660	3,611	2,581	—	2,481
Unclassified	225	593	56	573	—	554
High school type						
Public	—	9,969	8,647	9,727	—	9,385
Catholic	—	964	2,479	911	—	876
Other private	—	294	337	287	—	275
Postsecondary education status [4]						
Full-time	—	—	4,466	—	—	—
Part-time	—	—	3,275	—	—	—
Never enrolled	—	—	3,678	—	—	—
Missing/unclassified	—	—	44	—	—	—
October 1980 postsecondary education attendance status						
Part-time 2-year public institution	—	—	—	—	—	352
Part-time 4-year public institution	—	—	—	—	—	152
Full-time 2-year public institution	—	—	—	—	—	1,312
Full-time 4-year public institution	—	—	—	—	—	1,986
Full-time 4-year private institution	—	—	—	—	—	1,015
Not a student	—	—	—	—	—	4,523
Other and missing	—	—	—	—	—	1,196
Postsecondary education plans						
No plans	—	—	—	—	—	1,623
Attend vocational/technical school	—	—	—	—	—	1,835
Attend college less than four years	—	—	—	—	—	1,528
Earn bachelor's degree	—	—	—	—	—	2,631
Earn advanced degree	—	—	—	—	—	2,265
Missing	—	—	—	—	—	654
Participation in high school extracurricular activities [5]						
Never participated	—	—	—	—	—	1,024
Participated as a member	—	—	—	—	—	4,104
Participated as a leader	—	—	—	—	—	4,457

[1] The SES index is a composite of five equally weighted measures: father's education, mother's education, family income, father's occupation, and presence of certain items in the respondent's household.

[2] Includes attendance at a vocational, trade, or business school, or 2–year college; or attendance at a 4–year college resulting in less than a bachelor's degree.

[3] Includes those with a bachelor's or higher level degree.

[4] Postsecondary education status was determined by students' enrollment in academic or vocational study during the four semesters—fall 1982, spring 1983, fall 1983, and spring 1984—following their scheduled high school graduation. Students who enrolled in full-time study in each of the four semesters were classified as full time. Students who were enrolled in part-time study in any of the four semesters and those who were enrolled in full-time study in fewer than four semesters were classified as part time. Students who had neither enrolled on a full-time nor part-time basis in each of the four semesters were classified as never enrolled.

[5] Responses to questions concerning participation in each of 15 different extracurricular activity areas (i.e., varsity sports, debate, band, subject-matter clubs, etc.) were used to classify students' overall level of participation in extracurricular activities. The difference between the sum of the three category respondent counts and the total sample size is due to missing data.

—Data not applicable.

NOTE.—Data from students who dropped out of school between the 10th and 12th grades were not used in analyses of sophomore samples.

Table A3.—Design effects (DEFF) and root design effects (DEFT) for selected High School and Beyond surveys and subsamples

Subsample characteristic	Followup survey of 1980 sophomores in 1984	Followup survey of 1980 seniors in 1984	Followup survey of 1980 sophomores in 1986	Followup survey of 1980 seniors in 1986
Total sample	**2.40 (1.54)**	**2.87 (1.69)**	**2.19 (1.47)**	**2.28 (1.50)**
Sex				
Male	—	—	2.07 (1.43)	2.13 (1.45)
Female	—	—	2.06 (1.43)	2.26 (1.50)
Race/ethnicity				
White and other	2.06 (1.42)	2.09 (1.44)	1.92 (1.38)	1.70 (1.30)
Black	2.22 (1.47)	2.26 (1.50)	2.19 (1.47)	2.40 (1.54)
Hispanic	3.15 (1.73)	3.72 (1.92)	3.11 (1.76)	4.06 (2.01)
Socioeconomic status composite (SES)				
Low	1.91 (1.37)	2.28 (1.50)	1.83 (1.35)	2.31 (1.51)
Middle	1.95 (1.39)	1.81 (1.34)	2.06 (1.42)	2.02 (1.42)
High	2.05 (1.42)	1.93 (1.38)	1.92 (1.38)	1.71 (1.30)

—Not available

NOTE.—The average design effect for the 1980 sophomore cohort first followup (1982) survey is 3.59(1.89) and the average design effect for the 1980 senior first followup (1982) survey is 2.64(1.62).

Table A4.—Standard errors for the NAEP reading proficiency study: 1971 to 1992

Item	Standard error for estimate (mean) [1]			Standard error for percent of students reading at or above anchor level 200						Standard error for percent of students reading at or above anchor level 250					
	1971	1990	1992	1971	1975	1980	1988	1990	1992	1971	1975	1980	1988	1990	1992
9-year-olds															
Total	1.0	1.2	0.9	1.0	0.8	1.0	1.3	1.3	1.1	0.6	0.6	0.8	1.1	1.0	0.8
White	0.9	1.3	1.0	1.0	0.8	0.7	1.6	1.4	1.2	0.7	0.7	0.9	1.5	1.2	1.0
Black	1.7	2.9	2.2	1.5	1.5	1.9	2.9	3.4	2.2	0.5	0.3	0.6	1.2	1.5	0.8
Hispanic	—	2.3	3.1	—	3.0	2.6	3.3	2.7	3.5	—	0.5	1.4	2.3	2.0	2.3
13-year-olds															
Total	0.9	0.8	1.2	0.5	0.4	0.4	0.6	0.6	0.7	1.1	1.0	1.1	1.3	1.0	1.4
White	0.7	0.9	1.2	0.3	0.2	0.2	0.6	0.6	0.6	0.9	0.9	0.8	1.5	1.2	1.4
Black	1.2	2.2	2.3	1.7	1.3	1.7	2.2	2.3	2.7	1.2	1.6	2.0	2.3	3.5	2.7
Hispanic	—	2.3	3.5	—	2.3	2.4	2.6	2.4	3.5	—	3.6	2.6	4.4	2.9	5.1
17-year-olds															
Total	1.2	1.1	1.1	0.3	0.3	0.3	0.3	0.3	0.4	0.9	0.7	0.9	0.8	1.0	0.8
White	1.0	1.2	1.4	0.2	0.1	0.1	0.3	0.2	0.3	0.7	0.6	0.6	0.9	1.1	0.9
Black	1.7	2.3	2.1	1.5	1.8	1.7	1.0	1.3	1.6	1.6	1.6	2.0	2.4	2.8	2.3
Hispanic	—	3.6	3.7	—	2.4	1.8	2.4	2.1	2.3	—	4.1	3.1	4.8	4.7	4.0

[1] Item response theory is used as a basis to estimate performance at the three levels on a common scale from 0 to 500.

—Data not available.

Table A5.—Standard errors for the NAEP writing, history, and civics proficiency studies: 1976 to 1992

Item	Standard error for estimated (mean) [1] writing performance						Standard error for estimated (mean) [1] history performance, 1988			Standard error for estimated percent correct in civics					
	4th grade		8th grade		11th grade					13-year-olds			17-year-olds		
	1984	1992	1984	1992	1984	1992	4th grade	8th grade	12th grade	1976	1982	1988	1976	1982	1988
Total	**1.5**	**1.5**	**2.0**	**1.3**	**1.6**	**1.4**	**0.9**	**0.7**	**1.0**	**0.2**	**0.4**	**0.4**	**0.3**	**0.5**	**0.5**
Male	2.8	1.7	2.3	1.9	1.4	1.2	1.2	1.0	1.3	0.2	0.4	0.6	0.3	0.6	0.7
Female	3.1	1.7	2.4	1.3	2.5	2.0	1.0	0.8	1.1	0.3	0.4	0.4	0.3	0.5	0.6
White	1.9	1.7	2.1	1.3	1.8	1.2	1.0	0.8	1.2	0.2	0.3	0.5	0.3	0.4	0.6
Black	5.0	3.8	5.7	4.0	3.6	3.2	1.9	1.5	1.7	0.3	0.4	0.6	0.5	0.5	1.0
Hispanic	5.8	3.6	6.4	2.2	6.6	3.8	1.7	1.9	1.8	0.6	0.5	1.8	0.8	1.2	1.7

[1] Item response theory used as a basis to estimate performance at the three levels on a common scale from 0 to 400.

Table A6.—Standard errors for the NAEP mathematics and science proficiency studies: 1977 to 1992

Item	Standard error for percent of students at or above—											
	Mathematics proficiency anchor level 250			Mathematics proficiency anchor level 300			Science proficiency anchor level 200			Science proficiency anchor level 250		
	1978	1982	1992	1978	1982	1992	1977	1982	1992	1977	1982	1992
9-year-olds												
Total	0.7	1.0	0.9	0.1	0.1	0.3	1.1	1.9	1.2	0.7	1.8	1.0
White	0.9	1.1	1.0	0.2	0.1	0.3	0.7	2.0	0.9	0.7	2.1	1.1
Black	0.6	0.8	1.4	0.1	0.1	0.1	1.5	2.7	3.5	0.6	1.3	1.4
Hispanic	2.5	1.7	2.5	0.5	0.0	0.5	3.1	6.1	4.3	1.7	2.7	1.8
13-year-olds												
Total	1.2	1.2	1.1	0.7	0.9	1.0	0.7	0.8	0.5	1.1	1.6	1.1
White	0.9	0.9	1.1	0.7	1.0	1.3	0.5	0.6	0.4	0.9	1.4	1.3
Black	2.1	2.5	2.7	0.5	1.0	0.7	2.4	2.4	2.8	1.7	1.9	2.8
Hispanic	2.9	2.5	2.7	1.0	1.0	1.2	2.4	3.3	2.6	1.8	5.1	2.9
17-year-olds												
Total	0.5	0.5	0.5	1.1	1.3	1.3	0.2	0.5	0.5	0.7	1.0	1.2
White	0.3	0.3	0.4	1.1	1.4	1.4	0.1	0.2	0.3	0.4	0.9	1.0
Black	1.7	1.5	2.5	1.6	1.5	3.9	1.3	1.9	1.8	1.5	2.1	3.7
Hispanic	2.3	1.9	2.2	2.7	2.2	4.9	1.7	2.9	2.6	1.7	2.7	6.6

Table A7.—Respondent counts for the National Educational Longitudinal Study: 1988, 1990, and 1992

Classification variable and subgroup	Base year, 1988	First followup 1990	Second followup 1992
Total respondents (unweighted)	**24,599**	**20,706**	**21,188**
Sex			
Male	12,241	10,462	10,713
Female	12,358	10,244	10,475
Race/ethnicity			
White, non-Hispanic	16,317	13,837	14,024
Black, non-Hispanic	3,009	2,218	2,260
Hispanic	3,171	2,751	2,922
Asian or Pacific Islander	1,527	1,302	1,406
American Indian or Alaskan Native	299	259	266
Other or unclassified	276	399	310
Socioeconomic status composite (SES)			
Low	5,934	4,556	4,395
Low-middle	5,788	4,472	4,501
High-middle	5,836	4,378	4,516
High	7,030	5,262	5,437
Unclassified	11	2,038	2,339
High school program (self-reported)			
Academic	7,298	6,420	7,567
General	3,369	7,990	6,125
Vocational	4,161	1,806	1,911
Unclassified	9,771	4,490	5,585
High school type			
Public	19,396	16,813	15,145
Catholic	2,602	1,012	934
Other private	2,601	1,602	1,530
Not enrolled	—	1,043	2,725
Missing	—	236	854
Postsecondary education plans			
No plans	2,685	2,483	2,646
Attend vocational/technical school	2,102	2,323	2,072
Attend college less than 4 years	3,078	3,074	2,457
Earn bachelor's degree	10,251	5,874	5,631
Earn advanced degree	6,268	5,269	5,580
Missing	215	1,683	2,802
School academic clubs and extracurricular activities			
Never participated	21,516	15,292	17,117
Participated as a member	2,798	5,144	3,355
Participated as a leader	285	270	716

—Not applicable.

Table A8.—Design effects (DEFF) and root design effects (DEFT) for selected National Educational Longitudinal Survey samples

Subsample characteristic	Base year 1988		First follow-up 1990		Second follow-up 1992	
	Mean DEFF	Mean DEFT	Mean DEFF	Mean DEFT	Mean DEFF	Mean DEFT
All students	2.54	1.56	3.802	1.912	3.668	1.881
Dropouts	—	—	4.705	1.997	2.919	1.686
Sex						
Male	1.98	1.39	3.456	1.817	3.094	1.729
Female	1.93	1.38	3.324	1.783	3.238	1.785
Race/ethnicity						
White and other	2.25	1.48	3.101	1.729	3.084	1.737
Black	1.65	1.27	3.804	1.867	2.938	1.654
Hispanic	2.06	1.41	2.643	1.591	2.772	1.626
Asian/Pacific Islander	2.00	1.40	2.758	1.609	2.511	1.562
American Indian/Alaskan Native	—	—	2.066	1.362	3.292	1.687
Socioeconomic status composite (SES)						
Low	1.58	1.25	2.797	1.644	2.931	1.680
Middle	1.66	1.28	3.138	1.732	2.516	1.569
High	1.84	1.34	3.576	1.817	3.849	1.921
High school type						
Public	2.27	1.48	3.147	1.736	3.116	1.733
Catholic	2.70	1.59	2.619	1.513	2.545	1.564
Other private	8.80	1.83	6.529	2.391	6.049	2.334
Community type						
Urban	—	—	3.463	1.842	3.742	1.897
Suburban	—	—	3.412	1.788	2.998	1.705
Rural	—	—	2.634	1.571	3.311	1.687

—Data not available.

Table A9.—Standard errors for undergraduates enrolled full-time and part-time in fall 1989, by aid status and source of aid during 1989–90, and control and level of institution

Control and level of institution	Nonaided	Receiving aid, by source				
		Any aid	Federal	State	Institutional	Other
	Full-time students					
All institutions	**0.82**	**0.82**	**0.80**	**0.77**	**0.65**	**0.35**
Public	1.01	1.01	0.94	0.98	0.66	0.43
4-year doctoral	1.38	1.38	1.25	1.20	0.91	0.73
Other 4-year	1.78	1.78	1.63	2.11	1.16	0.72
2-year	2.14	2.14	2.03	1.89	1.44	0.73
Less than 2-year	5.20	5.20	6.42	2.55	2.19	5.36
Private, nonprofit	1.20	1.20	1.18	1.48	1.35	0.70
4-year doctoral	1.70	1.70	1.66	1.94	1.61	1.09
Other 4-year	1.59	1.59	1.62	2.12	1.95	0.97
2-year	3.33	3.33	3.10	3.98	3.99	2.80
Less than 2-year	3.74	3.74	4.73	8.78	8.81	2.89
Private, proprietary	1.19	1.19	1.39	1.53	1.66	0.59
2-year and above	1.65	1.65	1.86	2.93	2.53	0.93
Less than 2-year	1.69	1.69	2.01	1.32	2.11	0.56
	Part-time students					
All institutions	**0.96**	**0.96**	**0.61**	**0.46**	**0.44**	**0.55**
Public	1.05	1.05	0.66	0.49	0.52	0.59
4-year doctoral	1.53	1.53	1.31	0.85	0.65	0.81
Other 4-year	1.70	1.70	1.12	0.81	0.90	0.91
2-year	1.35	1.35	0.83	0.62	0.67	0.76
Less than 2-year	8.23	8.23	3.17	4.47	1.36	4.02
Private, nonprofit	1.69	1.69	1.24	1.27	0.88	1.51
4-year doctoral	1.95	1.95	1.74	1.73	0.91	2.03
Other 4-year	2.34	2.34	1.59	1.73	1.21	2.07
2-year	5.19	5.19	5.64	3.65	3.53	1.95
Less than 2-year	10.58	10.58	10.55	3.90	4.52	11.17
Private, proprietary	4.55	4.55	4.69	2.33	1.51	1.17
2-year and above	4.21	4.21	5.28	3.22	3.52	1.89
Less than 2-year	6.60	6.59	6.65	3.14	1.23	1.45

Table A10.—Respondent counts of full-time workers from the Recent College Graduate survey: 1976 to 1991

Field of study	Number employed full time				
	1974–75 graduates in May 1976	1979–80 graduates in May 1981	1983–84 graduates in April 1985	1985–86 graduates in April 1987	1989–90 graduates in April 1991
Total respondents (unweighted)	**2,464**	**5,521**	**6,799**	**15,024**	**9,451**
Professions	1,840	4,260	3,730	8,987	3,825
Arts and sciences	514	811	2,586	4,869	2,256
Other	110	450	483	1,168	3,370
Newly qualified to teach	1,337	2,469	1,109	2,546	1,966
Not newly qualified to teach	1,127	3,052	5,690	12,478	7,485
Professions	601	1,841	2,809	7,043	2,549
Engineering	80	270	601	915	411
Business and management	290	749	1,532	2,407	1,598
Health	72	252	387	3,106	281
Education [1]	141	464	146	521	188
Public affairs and services	18	106	143	94	71
Arts and sciences	433	770	2,430	4,369	2,006
Biological sciences	83	116	243	380	179
Physical sciences and mathematics	40	103	1,062	1,782	466
Psychology	64	105	189	366	316
Social sciences	107	252	449	780	813
Humanities	139	194	487	1,061	232
Other	93	441	451	1,066	2,930
Communications	7	73	240	392	217
Miscellaneous	86	368	211	674	2,713

[1] Includes those who had not finished all requirements for teaching certification or were previously qualified to teach.

Table A11.—Estimated enrollment rates and standard errors in the October Current Population Survey

Base of percentage, in thousands	Estimated percentage				
	2 or 98	5 or 95	10 or 90	25 or 75	50
	Total or white persons				
100	2.1	3.3	4.6	6.6	7.6
250	1.3	2.1	2.9	4.2	4.8
500	1.0	1.5	2.0	2.9	3.4
1,000	0.7	1.0	1.4	2.1	2.4
2,500	0.4	0.7	0.9	1.3	1.5
5,000	0.3	0.5	0.6	0.9	1.1
10,000	0.2	0.3	0.5	0.7	0.8
25,000	0.13	0.2	0.3	0.4	0.5
50,000	0.09	0.15	0.2	0.3	0.3
100,000	0.07	0.10	0.05	0.2	0.2
150,000	0.05	0.12	0.12	0.2	0.2
	Black or Hispanic persons				
75	2.6	4.1	5.6	8.1	9.3
100	2.3	3.5	4.8	7.0	8.1
250	1.4	2.2	3.1	4.4	5.1
500	1.0	1.6	2.2	3.1	3.6
1,000	0.7	1.1	1.5	2.2	2.5
2,500	0.5	0.7	1.0	1.4	1.6
5,000	0.3	0.5	0.7	1.0	1.1
10,000	0.2	0.4	0.5	0.7	0.8
15,000	0.2	0.3	0.4	0.6	0.7
20,000	0.2	0.2	0.3	0.5	0.6

Table A12.—Estimated educational attainment rates and standard errors in the March Current Population Survey

Estimate	Base of percentage in thousands	Standard error	90 percent confidence interval [1]		90 percent confidence interval [1]	
			Lower bound	Upper bound	Lower bound	Upper bound
2 or 98	100	2.00	0.0	5.3	0.0	5.9
	100,000	0.06	1.9	2.1	1.9	2.10
10 or 90	100	4.30	2.9	17.1	1.6	18.4
	100,000	0.14	9.8	10.2	9.7	10.3
50	100	7.20	38.1	61.9	35.9	64.1
	100,000	0.20	49.7	50.3	49.6	50.4

[1] The confidence interval for the larger values can be found by taking the complement of that shown, e.g., for 98 it would be 94.1 to 100 for 95 percent confidence.

Table A13.—Estimated standard errors for selected estimates of persons from the ''Participation in Adult Education'' CPS supplement

Estimate	Standard error	90 percent confidence interval		90 percent confidence interval	
		Lower bound	Upper bound	Lower bound	Upper bound
10	4.5	3	17	1	19
50	10.2	33	67	30	70
500	30.0	451	550	441	559
50,000	253.0	49,583	50,417	49,504	50,496

Table A14.—Estimated participation rates and standard errors in the ''Participation in Adult Education'' CPS supplement

Estimate	Base of percentage in thousands	Standard error	90 percent estimate confidence interval [1]		90 percent estimate confidence interval [1]	
			Lower bound	Upper bound	Lower bound	Upper bound
1 to 99	50	2.40	0.0	5.0	0.0	6.7
	5,000	0.20	0.7	1.3	1.6	2.4
10 or 90	50	7.10	0.0	21.7	0.0	23.9
	5,000	0.70	8.8	11.2	8.6	11.4
50	50	11.80	30.5	69.5	26.9	73.1
	5,000	1.20	48.0	52.0	47.6	52.4

[1] The confidence interval for the larger values can be found by taking the complement of that shown, e.g., for 99 it would be 93.3 to 100 for 95 percent confidence.

Table A15.—Percent of seniors who had ever used selected drugs and 95 percent confidence limits: 1986 [1]

Drug	Lower limit	Observed estimate	Upper limit
Alcohol	89.7	91.3	92.7
Marijuana/hashish	48.7	50.9	53.1
LSD	6.3	7.2	8.2
PCP	3.8	4.8	6.0
Cocaine	15.5	16.9	18.4
Heroin	0.8	1.1	1.4

[1] Approximate sample size = 15,200.

Table A16.—Sampling errors (95 percent confidence level) for percentages estimated from the Gallup Poll: 1992 and 1993

Percent	Size of sample						
	1,500	1,000	750	600	400	200	100
	Recommended allowance for sampling error of a percentage						
Percentages near 10 or 90	2	2	3	3	4	5	8
Percentages near 20 or 80	3	3	4	4	5	7	10
Percentages near 30 or 70	3	4	4	5	6	8	12
Percentages near 40 or 60	3	4	5	5	6	9	12
Percentages near 50	3	4	5	5	6	9	13
Percentages near 60	3	4	5	5	6	9	12
Percentages near 70	3	4	5	5	6	8	12
Percentages near 80	3	3	4	4	5	7	10
Percentages near 90	2	2	3	3	4	5	8

Table A17.—Sampling errors (95 percent confidence level) for the difference in two percentages estimated from the Gallup Poll: 1992 and 1993

Size of sample	Size of sample					
	1,500	1000	750	600	400	200
	Recommended allowance for sampling error of a difference in percentages (percentages near 80 or 20)					
1,500	4					
1,000	4	5				
750	5	5	5			
600	5	5	6	6		
400	6	6	6	7	7	
200	8	8	8	8	9	10
	Recommended allowance for sampling error of a difference in percentages (percentages near 50)					
1,500	5					
1,000	5	6				
750	6	6	7			
600	6	7	7	7		
400	7	8	8	8	9	
200	10	10	10	10	11	13

Table A18.—Approximate sampling errors (95 percent confidence level) for percentages estimated from Metropolitan Life ''Survey of the American Teacher, 1987''

Percentage	Size of sample					
	2000	1500	1000	500	200	100
	Recommended allowance for sampling error of a percentage					
Percentages near 10 or 90	1	2	2	3	4	6
Percentages near 20 or 80	2	2	2	4	6	8
Percentages near 30 or 70	2	2	3	4	6	9
Percentages near 40 or 60	2	3	3	4	7	10
Percentages near 50	2	3	3	4	7	10

Table A19.—Approximate sampling errors (95 percent confidence level) for the differences in two percentages estimated from the Metropolitan Life ''Survey of the American Teacher, 1987''

Sample sizes of two groups being compared	Recommended allowance for sampling error of a difference in percentages				
	Percentage result at 10% or 90%	Percentage result at 20% or 80%	Percentage result at 30% or 70%	Percentage result at 40% or 60%	Percentage result at 50%
2,000 vs. 1,000	2	3	4	4	4
1,000 vs. 1,000	3	4	4	4	4
1,000 vs. 200	5	6	7	7	8
1,000 vs. 100	6	8	9	10	10
200 vs. 100	7	10	11	12	12

Table A20.—Maximum differences required for significance (90 percent confidence level) between sample subgroups of the ''Status of the American Public School Teacher'' survey

Size of one subgroup	Size of other subgroup						
	100	200	300	400	500	600	700
100	11.6	10.1	9.5	9.2	9.0	8.9	8.8
200	10.1	8.2	7.5	7.1	6.9	6.7	6.6
300	9.5	7.5	6.7	6.3	6.0	5.8	5.7
400	9.2	7.1	6.3	5.8	5.5	5.3	5.2
500	9.0	6.9	6.0	5.5	5.2	5.0	4.8
600	8.9	6.7	5.8	5.3	5.0	4.7	4.6
700	8.8	6.6	5.7	5.2	4.8	4.6	4.4